

EXHIBIT A

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

INTERNATIONAL BUSINESS MACHINES
CORPORATION,

Plaintiff,

v.

GROUPON, INC.

Defendant.

C.A. No. 16-122-LPS-CJB

JURY TRIAL DEMANDED

PRELIMINARY INVALIDITY CONTENTIONS OF DEFENDANT GROUPON, INC.

Pursuant to the Court’s October 3, 2016 Order (D.I. 17) and December 19, 2016 Order (D.I. 32), Defendant Groupon, Inc. (“Groupon”) makes the following preliminary disclosure of Invalidity Contentions to Plaintiff International Business Machines Corporation (“IBM”) regarding the currently asserted claims of United States Patent Nos. 5,796,967 (the “’967 patent”), 7,072,849 (the “’849 patent”), 5,961,601 (the “’601 patent”), and 7,631,346 (the “’346 patent”), collectively referred hereto as the “patents-in-suit.” In its January 20, 2017 Preliminary Infringement Contentions (“Infringement Contentions”), IBM asserts claims 1-9, 12, and 17 of the ’967 patent, claims 1-9, 12-21, and 25 of the ’849 patent, claims 1-12, 14-25, 27-38, 40-49, and 51-68 of the ’601 patent, and claims 1-3, 5, 8, 10, and 12-13 of the ’346 patent (collectively, the “Asserted Claims”).

This preliminary disclosure is based on Groupon’s present understanding of IBM’s interpretation of the claims of the patents-in-suit as advanced by IBM in its Preliminary Infringement Contentions. Nothing in Groupon’s disclosures should be regarded as necessarily reflecting the

proper interpretation of the claims or an interpretation of the claims Groupon agrees with or proposes. Groupon disputes IBM's apparent claim interpretations and will propose alternative constructions to those proposed by IBM in its infringement contentions at the appropriate time.¹

Groupon will amend and supplement these disclosures as it continues to search for and analyze relevant prior art. Groupon may rely on additional prior art; further analysis of prior art; application of prior art to new or different claims, depositions and discovery from prior art sources and authors; analysis of prior art products; combinations of references; expert opinion and/or testimony; evidence supporting invalidity of any asserted claim; and any additional relevant information that may result from its further investigation and discovery. Groupon may also rely on additional information, testimony, and/or analysis concerning operation of any prior art systems. And, Groupon may also amend and supplement this disclosure consistent with the Court's Scheduling Order (D.I. 17) or otherwise as the Court may allow.

Further, Groupon may amend or supplement this disclosure because IBM's preliminary infringement disclosures are deficient in numerous respects. For example, IBM has failed to specifically identify where each element of each Asserted Claim is found within each accused instrumentality. IBM has failed to identify the type of conduct alleged to infringe or the persons or entities that allegedly engage in such conduct. IBM has also failed to identify specifically whether each limitation is purportedly literally present or present under the doctrine of equivalents in each accused instrumentality. Because curing such deficiencies may lead to fur-

¹ Groupon is aware of the claim construction order in *International Business Machines v. The Priceline Group*, C.A. No. 15-cv-00137-LPS, D.I., 234, 235 (D. Del. October 28, 2016), and is applying the constructions therein as appropriate in these contentions. Groupon does not concede that this order renders the claim construction process in the instant case superfluous and reserves all of its rights to advocate for a construction of any term in the asserted claims pursuant to the scheduling order in this action. (D.I. 17)

ther grounds for invalidity and non-infringement, Groupon specifically reserves the right to modify, amend, or supplement this disclosure should IBM amend or supplement its infringement contentions.

Groupon may also amend this disclosure in response to any positions taken by IBM during the course of the litigation, including without limitation IBM's claim construction positions or any contention by IBM that the prior art references described herein fail to render the Asserted Claims anticipated or obvious. Groupon reserves the right to amend these Preliminary Invalidity Contentions to rely upon inventor and party admissions concerning the scope of the Asserted Claims and the teachings of the prior art and in response to any claim construction order from the Court.

Groupon may further supplement or amend this disclosure once IBM complies with its discovery obligations. To date, IBM has not yet produced all prior art and invalidity disclosures, including invalidity contentions, deposition testimony, and expert reports from *International Business Machines v. The Priceline Group*, C.A. No. 15-cv-00137-LPS (D. Del.). Once IBM complies with its discovery obligations and Groupon meaningfully reviews IBM's production, Groupon may supplement or amend this disclosure.

I. PRELIMINARY INVALIDITY CONTENTIONS

Groupon's prior art reference charts (attached hereto as Exhibits A1-A24, B1-B26, C1-C15 and D1-18) identify where specifically in each item of prior art each element of each asserted claim is found, citing particular teachings/disclosure of the referenced art as applied to features of the patents-in-suit. While each element of each asserted claim is found in each item of prior art in multiple locations, the attached charts provide examples of citations sufficient to identify at least one such location where each claim limitation is found in each item of prior art. The citations are exemplary and not exclusive, and Groupon reserves the right to rely on uncited

portions of the prior art references and on other publications and expert testimony as aids in understanding and interpreting the cited portions, as providing context to them, and as additional evidence that the prior art discloses a claimed feature. Indeed, persons of skill in the art generally would understand an item of prior art in the context of other publications, literature, products, and understanding. Thus, Groupon reserves the right to establish what was known to a person having ordinary skill in the art through other publications, products, and/or testimony. Further, Groupon reserves the right to modify, amend, and/or change its interpretation of the prior art as additional or new constructions of the claim limitations may be provided by the Court, based on additional analysis by Groupon's technical expert witnesses or based on other circumstances that may affect the interpretation or application of the claims.

The following lists provide the identity of each item of prior art patent, publication, or system that anticipates one or more of the asserted claims of the patents-in-suit or renders one or more of the asserted claims of the patents-in-suit obvious.

U.S. Patent No. 5,796,967

Exhibit	Short Name
A01	Tornetta
A02	Hernandez
A03	CompuServe Navigator
A04	Designing Xerox
A05	Xerox Star
A06	Hypercard
A07	Yourick
A08	Teitelman
A09	Salomon
A10	Satyanarayanan
A11	Henderson
A12	Hedges

A13	CLAM
A14	Caplinger
A15	Agarwal
A16	CIM
A17	Alber
A18	Arlen
A19	Interactive Architecture
A20	Power of NAPLPS
A21	Gecsei
A22	Morris
A23	Smith
A24	Talarzyk
A25	Akscyn
A26	Halasz
A27	Irven
A28	Trintex

U.S. Patent No. 7,072,849

Exhibit	Short Name
B01	Alber
B02	Bado
B03	Caplinger
B04	CompuServe Navigator
B05	Freeman '279
B06	Humble
B07	Malec
B08	Salomon
B09	Simon
B10	Talarzyk
B11	Telesophy 1985
B12	Telesophy 1987

B13	Trintex System
B14	Yourick
B15	Beyond Videotex
B16	Interactive Architecture
B17	Power of NAPLPS
B18	TextUp
B19	Nisenholtz
B20	CompuServe Information Manager
B21	Gecsei
B22	ITC Project
B23	Akscyn
B24	Halasz
B25	Irven
B26	Morris

U.S. Patent No. 5,961,601

Exhibit	Short Name
C01	Danish
C02	Diener
C03	DuFresne
C04	Farquhar
C05	Graber
C06	Ibrahim
C07	Levergood
C08	Levine
C09	Lewine
C10	Minor
C11	Payne
C12	Perrochon
C13	Popp

C14	Da Silva
C15	Tobin
C16	OCLC Gateway
C17	WebStar
C18	Unleashed
C19	Admitted Prior Art
C20	Yoshida
C21	Yan
C22	Chiu '022
C23	Lewine '565
C24	WWW-Talk
C25	Freeman-Benson

U.S. Patent No. 7,631,346

Exhibit	Short Name
D01	FIM
D02	Bladow
D03	Chawla '492
D04	Chawla '696
D05	Doshi
D06	Dutcher
D07	Grandcolas
D08	Harris
D09	Kelly
D10	Levergood
D11	Mellmer

D12	Moreh
D13	Purpura
D14	Sunada
D15	Ting
D16	Weissman
D17	Yared
D18	Erdos
D19	DigitalMe
D20	Pfitzmann
D21	Admitted Prior Art
D22	Demchenko
D23	Kirschner
D24	Sullivan
D25	Liberty Alliance

A. General State of the Art and Motivation to Combine

The following list identifies prior art references that establish the general state of the art at the time of each of the patents-in-suit. This list is not exhaustive and Groupon may supplement and amend this list as its investigation continues and the case progresses, and especially once IBM complies with its discovery obligations as described above. Groupon may also supplement and amend this list based on any information it gleans from expert or other witness testimony in either this case or the *Priceline* case.

U.S. Patent No. 5,796,967**Prior Art Patents and Patent Applications**

Patent Number	Country of Origin	Date of Issue/ Publication
US 4,870,576 (“Tornetta”)	US	Sept. 26, 1980 (March 19, 1986)
US 4,962,475 (“Hernandez”)	US	Oct. 9, 1990 (Dec. 26, 1984)
US 4,775,935 (“Yourick”)	US	Sept. 22, 1986 (Oct. 4, 1988)
US 5,072,412 (“Henderson”)	US	March 25, 1987 (Dec. 10, 1991)
US 4,339,798 (“Hedges”)	US	Dec. 17, 1979 (July 13, 1982)
US 4,688,167 (“Agarwal”)	US	Sept. 27, 1984 (August 18, 1987)
US 4,649,380 (“Penna”)	US	Mar. 10, 1987 (June 11, 1984)
US 4,807,142 (“Agarwal ’142”)	US	Feb. 21, 1989 (Oct. 9, 1984)
US 4,989,141 (“Lyons”)	US	Jan. 29, 1991 (June 1, 1987)
US 5,157,717 (“Hitchcock”)	US	Oct. 20, 1992 (Feb. 20, 1991)
US 5,202,828 (“Vertelney”)	US	Apr. 13, 1993 (May 15, 1991)
US 5,367,624 (“Cooper”)	US	Nov. 22, 1994 (June 11, 1993)
US 5,375,200 (“Dugan”)	US	Dec. 20, 1994 (Nov. 13, 1992)
US 5,392,400 (“Berkowitz”)	US	Feb. 21, 1995 (July 2, 1992)
US 5,432,901 (“Harper”)	US	July 11, 1995 (Jan. 30, 1992)
US 5,434,963 (“Kuwamoto”)	US	July 18, 1995 (Dec. 8, 1992)
US 5,463,726 (“Price”)	US	Oct. 31, 1995 (Sept. 6, 1994)
US,4,689,478 (“Hale”)	US	Aug. 25, 1987 (Dec. 24, 1984)

Prior Art Publications

Title	Date of Publication	Author/Publisher (short cite)
CompuServe Navigator User's Guide	January 1988	CompuServe ("CompuServe Navigator")
"Designing the Star User Interface"	April 1982	Dr. David Smith et al. / Byte Magazine, Volume 7, Issue 4 ("Byte Magazine")
Apple Macintosh HyperCard User's Guide	1987	Apple ("User's Guide")
The Complete HyperCard Handbook	1987	Danny Goodman ("Goodman")
The Complete HyperCard Handbook by Danny Goodman, Expanded 2nd Edition	1988	Danny Goodman ("Handbook")
HyperCard Developer's Guide	1988	Danny Goodman ("Developer's Guide")
"The star user interface: an overview"	1982	David Canfield Smith et al. / Proceedings of the National Computer Conference (1982) ("NCC Proceedings")
"The Xerox Star: A Retrospective"	September 1989	Jeff Johnson et al. / IEEE Computer, Volume 22, Issue 9 ("Johnson")
"A Tour Through Cedar"	1985	W. Teitelman / IEEE Transactions on Software Eng'g
"Design and Implementation of An Electronic Special Interest Magazine"	September 1986	Salomon / UCLA Thesis ("Salomon")
"The ITC Project: An Experiment in Large-Scale Distributed Personal Computing"	October 1984	M. Satyanarayanan ("Satyanarayanan")
"CLAM – an Open System for Graphical User Interfaces"	1987	Lisa A. Call et al. ("CLAM")
"An Information System Based on Distributed Objects"	October 4-8, 1987	Michael Caplinger, ("Caplinger")
"HyperCard Made Easy"	1988	William B. Sanders / Scott, Foresman and Company ("HyperCard Made Easy")
Videotex / Teletext: Principles & Practices	1985	Antone F. Alber, McGraw-Hill, Inc. ("Alber")
"Trintex: Exclusive Status Report"	November 1986	Gary Arlen, Videotex Teletext News, No. 94 ("Arlen")

Title	Date of Publication	Author/Publisher (short cite)
“Interactive Architecture And The Role Of The Designer”	1984	John Vaughan, Videotex Proceedings 1984 (“Interactive Architecture”)
“The Power of NAPLPS: Beyond Videotex”	1985	John Vaughan, Videotex International Proceedings 1985 (“Power of NAPLPS”)
The Architecture of Videotex Systems	1983	Jan Gecsei, Prentice-Hall, Inc. (“Gecsei”)
“Caching Hints in Distributed Systems”	January 1987	Douglas B. Terry (“Terry”)
“Hypermedia: finally here”	November 1987	Tekla S. Perry, IEEE Spectrum (“Perry”)
“Custom Communications from the Consumer Databanks”	September 1987	Mick O’Leary (“O’Leary”)
“Multi-Media Information Services: A Laboratory Study”	June 1988	Judith H. Irven et al. (“Irven”)
“Andrew: A Distributed Personal Computing Environment”	March 1986	James H. Morris et al. (“Morris”)
“Menlo Corporation's Pro-Search: Review of a Software Search Aid”	1986	Barbara Quint (“Quint”)
“Foreshadowing Electronic Publishing Age: First Exposures to Viewtron”	December 1985	Tony Atwater et al. (“Atwater”)
“Defining Constraints Graphically”	April 1986	Alan Borning (“Borning”)
“DVI - A Digital Multimedia Technology”	July 1989	David G. Ripley (“Ripley”)
“The Trillium User Design Environment”	April 1986	D. Austin, Jr. Henderson (“Trillium User”)
“The Consul/CUE Interface: An Integrated Interactive Environment”	December 1983	Kaczmarek, T. et al. (“Kaczmarek”)
“The Computer Sciences Electronic Magazine: Translating from Paper to Multimedia”	May 3, 1992	W. Randall Koons et al. (“Koons”)
“KMS: A Distributed Hypermedia System for Managing Knowledge In Organizations”	November 1987	Robert Akscyn, et al. (“Akscyn”)
“A Comparison Application Sharing Mechanisms Real-Time Desktop Conferencing Systems”	1990	S. R. Ahuja et al. (“Ahuja”)

Title	Date of Publication	Author/Publisher (short cite)
“Reflections on Notecards: Seven Issues for the Next Generation of Hypermedia Systems”	July 1988	Frank G. Halasz (“Halasz”)
“A Tour Through Cedar”	1985	Warren Teitelman (“Teitelman”)
“An Input-Output Model for Interactive Systems”	April 1986	Mary Shaw (“Shaw”)
“Officeaid: An Integrated Document Management System”	1984	Allison Lee et al. (“Officeaid”)
“The Visi On Operating Environment”	September 1983	William T. Coleman III et al. (“Coleman”)
“An Experimental Multi-Media Bridging System”	1988	E.J. Addeo et al. (“Addeo”)
“A Multiple, Virtual-Workspace Interface Support User Task Switching”	1987	Stuart K. Card et al. (“Card”)
“gIBIS: A Hypertext Tool for TeamDesign Deliberation”	November 1987	Conklin, Jeff et al. (“Conklin”)
“A Control Panel Interface Graphics Image Processing Applications”	1987	Gene I. Fisher et al. (“Fisher”)
“HDM: A Model for the Design of Hypertext Applications”	December 1991	Franca Garzotto, et al. (“Garzotto”)
“Enhancing the Usability of an Office Information System Through Direct Manipulation”	December 1983	Allison Lee et al. (“Office Information System”)
“Domain Delphi: Retrieving Documents Online”	April 1986	Penny Orwick (“Orwick”)
“Teletext and Videotex in the United States: Market Potential Technology Public Policy Issues”	1982	John Tydeman et al. (“Tydeman”)
“New Package Rates”	July 7, 1987	Peter Helmer (“IBM-GROUPON10120808”)
“Notes from Product Descriptor Meeting”	March 11, 1987	Trintex (“IBM-GROUPON10100828”)
“Provider Agreements [Entered] ”	July 20, 1987	Thomas Witt (“IBM-GROUPON10102751”)
“Reception System Technical Review”	June 1986	Trintex (“IBM-GROUPON10102910”)

Title	Date of Publication	Author/Publisher (short cite)
“Trintex Announces First Advertisers”	May 22, 1987	Trintex (“IBM-GROUPON10100493”)
“Client Dates”	January 16, 1987	Susan Pechman (“IBM-GROUPON10120750”)
“Coldwell Banker Invitation”	March 31, 1987	Bruce E. Bellmare (“IBM-GROUPON10102967”)
“Component Level Advertising Descriptor”	January 17, 1986	Steven J. Schimmed (“IBM-GROUPON10103874”)
“Dollar Bank, High Level Design”	May 5, 1987	Trintex (“IBM-GROUPON10121898”)
“Dreyfus Invitation”	May 13, 1987	Bruce E. Bellmare (“IBM-GROUPON10103255”)
“Trintex Product Descriptor”	February 23, 1987	Henry Heilbrunn (“IBM-GROUPON10100766”)
“Contract Procedures”	February 27, 1987	Peter Helmer (“IBM-GROUPON10100914”)
“Allstate Testing Letter”	May 8, 1987	Glenn Shapiro (“IBM-GROUPON10100910”)
“Signed Provider Agreements”	July 8, 1987	Bruce W. Thurlby (“IBM-GROUPON10102738”)
“System Architecture Overview”	February 24, 1986	A.M. Wolf (“IBM-GROUPON10120217”)
“Visions Document”	April 10, 1987	Henry Heilbrunn (“IBM-GROUPON10120654”)
“Viewtron: How to Use”	1983	AT&T (“Viewtron Video”)
The New Electronic Media “Videotex”	1987	W. Wayne Talarzyk, Lexington Books (“Talarzyk”)

Prior Art Systems/Services

Item/Service
CompuServe (“CompuServe Navigator”)
CompuServe Information Manager (“CIM”)
Xerox Star Information System (“Xerox Star”)
Apple HyperCard
Trintex/Prodigy

Item/Service
Viewtron

U.S. Patent No. 7,072,849

Prior Art Patents and Patent Applications

Patent Number	Country of Origin	Date of Issue/ Publication
US 4,703,423 (“Bado”)	US	Oct. 27, 1987 (July 10, 1984)
US 4,602,279 (“Freeman ’279”)	US	July 22, 1986 (Nov. 29, 1983)
US 4,833,308 (“Humble”)	US	May 23, 1989 (July 24, 1986)
US 4,973,952 (“Malec”)	US	Nov. 27, 1990 (Sept. 21, 1987)
US 4,575,579 (“Simon”)	US	Mar. 11, 1986 (Dec. 17, 1979)
US 4,775,935 (“Yourick”)	US	Oct. 4, 1988 (Sept. 22, 1986)
EP 0,403,232A2 (“Parillo”)	US	Dec. 10, 1990 (June 12, 1990)
US 4,751,578 (“Reiter”)	US	June 14, 1988 (May 28, 1985)
US 5,042,809 (“Richardson”)	US	Aug. 27, 1991 (Nov. 20, 1990)
US 5,220,501 (“Lawlor”)	US	June 15, 1993 (Dec. 8, 1989)
US 5,305,195 (“Murphy”)	US	Apr. 19, 1994 (Mar. 25, 1992)
US 5,410,326 (“Goldstein”)	US	Apr. 25, 1995 (Dec. 4, 1992)
US 6,418,556 (“Bennington”)	US	July 9, 2002 (Sept. 9, 1993)
US 3,991,495 (“Wilson”)	US	Nov. 16, 1976 (Dec. 4, 1974)

Prior Art Publications

Title	Date of Publication	Author/Publisher (short cite)
Videotex / Teletext: Principles & Practices	1985	Antone F. Alber, McGraw-Hill, Inc. ("Alber")
"An Information System Based on Distributed Objects"	October 4, 1987	Michael Caplinger, Bell Communications Research ("Caplinger")
CompuServe Navigator User's Guide	January 1988	CompuServe ("CompuServe Navigator")
"Design and Implementation of An Electronic Special Interest Magazine"	August 29, 1986	Gitta B. Salomon, Massachusetts Institute of Technology ("Salomon")
The New Electronic Media "Videotex"	1987	W. Wayne Talarzyk, Lexington Books ("Talarzyk")
"Telesophy"	August 1985	Bruce R. Schatz ("Telesophy 1985")
"Telesophy: A System for Manipulating the Knowledge of A Community"	May 1987	Bruce R. Schatz ("Telesophy 1987")
"IBM, Sears shooting for '88 entry; New life for videotex"	April 6, 1987	Cleveland Horton, Advertising Age ("Trintex 1")
"Trintex Signs up 42 Advertising Clients; Is Hoping for Launch in Early '88, VP Says,"	June 1, 1987	Jerrold Ballinger, DM News ("Trintex 2")
"Big advertisers link to videotext venture"	June 15, 1987	Cleveland Horton, Advertising Age ("Trintex 3")
"Trintex interactive videotext service will feature magazine-type format"	June 22, 1987	Arthur Markowitz, Discount Store News ("Trintex 4")
"Trintex to Aim On-Line Ads At Demographic Segments"	June 30, 1987	The American Banker ("Trintex 5")
"Inside Trintex; Technology & Operations supplement"	September 8, 1987	Women's Wear Daily ("Trintex 6")
"Trintex: Videotex Gets Personalized"	October 12, 1987	David Kiley, AdWeek ("Trintex 7")
"Trintex: Exclusive Status Report"	November 1986	Gary Arlen, Videotex Teletext News, No. 94 ("Trintex 8")
"NAPLPS: Beyond Videotex"	1985	John Vaughan ("Beyond Videotex")
"Interactive Architecture And The Role Of The Designer"	1984	John Vaughan, Videotex Proceedings 1984 ("Interactive

Title	Date of Publication	Author/Publisher (short cite)
		Architecture”)
“The Power of NAPLPS: Beyond Videotex”	1985	John Vaughan, Videotex International Proceedings 1985 (“Power of NAPLPS”)
“The Communication Studio”	1985	Textup Documentation by John Vaughan (“TextUp”)
“The Architecture of Videotex Systems”	1983	Jan Gecsei, Prentice-Hall Inc. (“Gecsei”)
“Custom Communications from the Consumer Databanks”	September 1987	Mick O’Leary (“O’Leary”)
“Multi-Media Information Services: A Laboratory Study”	June 1988	Judith H. Irven et al. (“Irven”)
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“Domain Delphi: Retrieving Documents Online”	April 1986	Penny Orwick (“Orwick”)
“Teletext and Videotex in the United States: Market Potential Technology Public Policy Issues”	1982	John Tydeman et al. (“Tydeman”)
“New Package Rates”	July 7, 1987	Peter Helmer (“IBM-GROUPON10120808”)
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“Component Level Advertising Descriptor”	January 17, 1986	Steven J. Schimmed (“IBM-GROUPON10103874”)
“Dollar Bank, High Level Design”	May 5, 1987	Trintex (“IBM-GROUPON10121898”)
“Dreyfus Invitation”	May 13, 1987	Bruce E. Bellmare (“IBM-GROUPON10103255”)
“Trintex Product Descriptor”	February 23, 1987	Henry Heilbrunn (“IBM-GROUPON10100766”)
“Contract Procedures”	February 27, 1987	Peter Helmer (“IBM-GROUPON10100914”)
“Allstate Testing Letter”	May 8, 1987	Glenn Shapiro (“IBM-GROUPON10100910”)
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“System Architecture Overview”	February 24, 1986	A.M. Wolf (“IBM-GROUPON10120217”)
“Visions Document”	April 10, 1987	Henry Heilbrunn (“IBM-GROUPON10120654”)
“Viewtron: How to Use”	1983	AT&T (“Viewtron Video”)
“Advertising on Videotex: What We’ve Learned”	1984	Martin Nisenholtz (“Nisenholtz”)
“The ITC Project: An Experiment in Large-Scale Distributed Personal Computing”	1984	M. Satyanarayanan (“ITC Project”)

Prior Art Systems/Services

Item/Service
CompuServe Navigator
CompuServe Information Manager
TextUp

Item/Service
Telesophy
Trintex/Prodigy

U.S. Patent No. 5,961,601

Prior Art Patents and Patent Applications

Patent Number	Country of Origin	Date of Issue/Publication
US 6,275,821 (Danish)	US	Aug. 14, 2001 (Oct. 14, 1994)
US 5,784,562 (Diener)	US	Jul. 21, 1998 (Oct. 10, 1995)
US 6,835,712 (DuFresne)	US	Nov. 10, 1998 (May 3, 1996)
US 5,717,860 (Graber '860)	US	Feb. 10, 1998 (Sep. 20, 1995)
U.S. 5,708,780 (Levergood)	US	Jan. 13, 1998 (June 7, 1995)
US 5,745,681 (Levine)	US	Apr. 28, 1998 (Jan. 11, 1996)
US 6,230,202 (Lewine '202)	US	May 8, 2001 (May 1, 1995)
US 5,740,252 (Minor)	US	Apr. 14, 1998 (Oct. 13, 1995)
US 5,715,314 (Payne)	US	Feb. 3, 1998 (Oct. 24, 1994)
US 6,249,291 (Popp)	US	June 19, 2001 (Sep. 22, 1995)
US 6,141,666 (Tobin)	US	Oct. 31, 2000 (Jan. 22, 1996)
U.S. 6,016,484 (Williams)	US	Jan. 18, 2000 (Apr. 26, 1996)
US 5,712,979 (Graber '979)	US	Jan. 27, 1998 (Sept. 20, 1995)
US 5,740,430 (Rosenberg)	US	Apr. 14, 1998 (Nov. 6, 1995)
US 5,752,022 (Chiu)	US	May 12, 1998 (Aug. 7, 1995)
US 5,768,581 (Cochran)	US	June 16, 1998 (May 7, 1996)
US 5,784,565 (Lewine '565)	US	July 21, 1998

Patent Number	Country of Origin	Date of Issue/Publication
		(Feb. 5, 1997)
US 6,092,199A (Dutcher)	US	July 18, 2000 (July 7, 1997)

Prior Art Publications

Title	Date of Publication	Author/Publisher (short cite)
“Collaborative Ontology Construction for Information Integration”	1995	Adam Farquhar, Richard Fikes (“Farquhar”)
“World-wide algorithm animation”	1994	Bertrand Ibrahim, Computer Networks and ISDN Systems, 27, (1994), pp. 255-265. (“Ibrahim”)
“Translation Servers: Gateways Between Stateless and Stateful Information Systems”	1994	Louis Perrochon, Network Services Conference. 1994 (“Perrochon”)
“Organizational Management System in an Heterogeneous Environment – A WWW Case Study”	January 31, 1995	Alberto Rodrigues Da Silva, Jose Borbinha, The International Federation for Information Processing (“Da Silva”)
“The World Wide Web and Emerging Internet Resource Discovery Standards for Scholarly Literature”	Spring 1995	Stuart Weibel, Library Trends, Vol. 43, No. 4 (“Weibel Library Trends”)
“An architecture for Scholarly Publishing on the World Wide Web”	1995	Stuart Weibel et al., Computer Networks and ISDN Systems 28 (“Weibel Architecture”)
“Web*-A Technology to Make Information Available on the Web”	April 1995	Almasi et. al, Proceedings of the Fourth Workshop on Enabling Technologies: Infrastructure for Collaborative Enterprises (“Almasi”)
“DynaWeb: Interfacing large SGML repositories and the WWW”	December 12, 1995	Gavin Thomas Nicol (“Nicol”)
“The Age of the Customized Web Site”	December 1996	Hayato Yoshida (“Yoshida”)

Title	Date of Publication	Author/Publisher (short cite)
“Techniques for Server-Side Dynamic Generation”	September 1994	Thomas Boutell et al. (“Boutell”)
“The Zweb W3 Gateway”	July 1995	Eric P. Kasten et al. (“Kasten”)
“Using the Web to Provide Private Information -or- Password Protection Without Modifying Clients”	May 1994	Bjorn N. Freeman-Benson (“Freeman-Benson”)
“Interactive Information Services Using World-Wide Web Hypertext”	April 20, 1994	Steve Putz (“Putz”)
“WWW Talk Mailing List”	January 1995	Robert S. Thau et al. (“WWW-Talk”)
“From User Access Patterns to Dynamic Hypertext Linking”	February 5, 1996	Tak Woon Yan et al. (“Yan”)
HTML and CGI Unleashed	1995	John December et al., Sams.net publishing (“Unleashed”)
HTML and CGI Unleashed (Contents of CD)	1995	John December et al., Sams.net publishing (“Unleashed CD”)

Prior Art Systems/Services

Item/Service
Online Computer Library Center (OCLC) Electronic Journals Online WWW Gateway (“OCLC Gateway”)
West Virginia University Concurrent Engineering Research Center WebStar System (“Webstar”)

U.S. Patent No. 7,631,346

Prior Art Patents and Patent Applications

Patent Number	Country of Origin	Date of Issue/Publication
US 6,115,040 (“Bladow”)	US	Sept. 5, 2000 Sept. 24, 1998)
US 7,877,492 (“Chawla ’492”)	US	Jan. 25, 2011

Patent Number	Country of Origin	Date of Issue/ Publication
		(Feb. 26, 2004)
US 6,826,696 (“Chawla ’696”)	US	Nov. 30, 2004 (July 26, 2000)
EP 1 089 516 (“Doshi”)	EPO	Apr. 4, 2001 (Sept. 20, 2000)
US 6,092,199 (“Dutcher”)	US	July 18, 2000 (July 7, 1997)
US 7,137,006 (“Grandcolas”)	US	Nov. 14, 2006 (Sept. 22, 2000)
US 7,610,617 (“Kelly”)	US	Oct. 27, 2009 (Dec. 22, 2004)
US 5,708,780 (“Levergood”)	US	Jan. 13, 1998 (Jun. 7, 1995)
US 7,680,819 (“Mellmer”)	US	Mar. 16, 2010 (Sep. 27, 2000)
US 6,959,336 (“Moreh”)	US	Oct. 25, 2005 (April 7, 2001)
US 6,421,768 (“Purpura”)	US	July 16, 2002 (May 4, 1999)
2004-302907 (“Sunada”)	Japan	Oct. 28, 2004 (Mar. 31, 2003)
US 2004/0205176 (“Ting”)	US	Oct. 14, 2004 (Mar. 21, 2003)
US 2002/0156905 (“Weissman”)	US	Oct. 24, 2002 (Feb. 21, 2001)
US 2003/0149781 (“Yared”)	US	Aug. 7, 2003 (Dec. 3, 2002)
US 5,550,981A (“Bauer”)	US	Aug. 27, 1996 (June 21, 1994)
WO 02/13,114A1 (“Sullivan”)	US	Feb. 14, 2002 (July 27, 2001)

Prior Art Publications

Title	Date of Publication	Author/Publisher (short cite)
“Federated Identity Management: Managed Beta Program”	2003	IBM (“FIM”)
“Give Me Liberty . . . ”	June 1, 2003	Jeffrey Harris (“Harris”)
“Shibboleth-Architecture DRAFT v05”	May 2, 2002	Marlena Erdos (“Erdos”)

Title	Date of Publication	Author/Publisher (short cite)
“Novell Debuts New digitalme ‘In- the-Net’ Service”	October 5, 1999	Novell, Inc. (“In the Net”)
“The Human Face of NDS”	August 1, 1999	Carrie Oakes (“Oakes”)
“Dynamic Creation and Management of Runtime Environments in the Grid”	September 6, 2003	Kate Keahey, et al. (“Dynamic Creation”)
“From Sandbox to Playground”	November 8, 2004	Kate Keahey et al. (“Sandbox”)
“Virtual Organisations in Computer Grids and Identity Management”	January-March 2004	Demchenko, Yuri (“Demchenko”)
“Walden: A Scalable Solution for Grid Account Management”	November 8, 2004	B Kirschner et al. (“Kirschner”)
“The PRIMA Grid Authorization System”	March 18, 2005	Markus Lorch et al. (“PRIMA”)
“Privilege Management and Authorization in Grid Computing Environments”	April 16, 2004	Markus Lorch (“Privilege Management”)
“Access Control Based on Attribute Certificates for Medical Intranet Applications”	March 17, 2001	Ioannis Mavridis et al. (“Mavridis”)
“Ping Identity Corp. Document SID2-5”	July 21, 2004	Ping Identity Corp. (“Ping Identity”)
“An Online Credential Repository for the Grid: MyProxy”	August 7, 2001	Jeff Novotny et al. (“Novotny”)
“Liberty ID-FF Architecture Overview”	Undated	Thomas Wason et al eds. (“Liberty Alliance Specification”)
“Liberty ID-FF Bindings and 962 Profiles Specification, version 1.2-errata-v2.0”	September 12, 2004	Scott Cantor et al. eds. (“Bindings and Profiles”)
“Liberty ID-FF Protocols and Schema Specification, version 965 1.2-errata-v3.0”	December 14, 2004	Scott Cantor et al. eds. (“Protocols and Schema”)
“Liberty ID-FF Authentication Context Specification, version 1.3”	December 14, 2004	Paul Madsen ed. (“Madsen”)
“LibertyMetadata Description and Discovery Specification, version	December 14, 2004	Peter Davis ed. (“Davis”)

Title	Date of Publication	Author/Publisher (short cite)
1.1”		
“Liberty Technical Glossary, version 1.4”	December 14, 2004	Jeff Hodges ed. (“Hodges”)
“Liberty ID-FF Implementation Guidelines, version 1.2”	April 18, 2004	Peter Thompson et al eds. (“Thompson”)
“Bindings and Profiles for the OASIS Security Assertion Markup Language (SAML), version 1.1, OASIS Standard”	September 2, 2003	Eve Maler et al. eds. (“Maler”)
“Uniform Resource Locators (URL), RFC 1738”	December 1994	T. Berners-Lee et al. (“RFC 1738”)
“Key words for use in RFCs to Indicate Requirement Levels, RFC 2119”	March 1997	S. Bradner (“RFC 2119”)
“HTTP State Management Mechanism, RFC 2965”	October 2000	D. Kristol et al. (“RFC 2965”)
“Hypertext Transfer Protocol – HTTP/1.1, RFC 2616”	June 1999	R. Fielding et al. (“RFC 2616”)
“Uniform Resource Identifiers (URI): Generic Syntax, RFC 2396”	August 1998	T. Berners-Lee et al. (“RFC 2396”)
“Simple Object Access Protocol (SOAP) 1.1”	May 8, 2000	Don Box et al. (“Box”)
HTML and CGI Unleashed	1995	John December et al., Sams.net publishing (“Unleashed”)
HTML and CGI Unleashed (Contents of CD)	1995	John December et al., Sams.net publishing (“Unleashed CD”)
“Privacy and Security Best Practices, version 2.0”	November 12, 2003	Christine Varney ed. (“Privacy and Security”)
“Privacy in Browser-Based Attribute Exchange”	November 21, 2002	Birgit Pfizmann (“Pfizmann”)

Prior Art Systems/Services

Item/Service
Novell DigitalMe

Each patent-in-suit simply arranges old elements known in the computer field, with each performing the same function it had been known to perform, and yields no more than what one would expect from such an arrangement—the combination is obvious. As apparently interpreted by IBM in its Preliminary Infringement Contentions, the '967 patent applies generically to any user interface constructed from optionally cached data and the related '849 patent applies generically to any user interface constructed from optionally cached data where a portion of the user interface displays advertising. The above-identified prior art references use those familiar elements for their primary or well-known purposes in a manner well within the ordinary level of skill in the art. The '601 patent is directed to a well-understood solution to a well-known problem—maintaining state information in a stateless protocol, particularly HTTP, by embedding state information or information sufficient to identify state in hyperlinks for future requests to the server in communication with a browser. Both the problem and the specific solutions claimed by the '601 patent were well understood before its invention. The '346 patent is directed to well-known solutions to the problem of reducing user burdens by offering a single sign-on service to interact with various protected resources on a network. This was a well-developed technological field by the time of the invention of the '346 patent.

The above-identified prior art references address the same or similar technical issues and suggest the same or similar solutions to those issues as the patents-in-suit. Accordingly, common sense and the knowledge of the prior art, along with its disclosure, render the asserted claims of the patents-in-suit invalid under Section 102 and/or Section 103.

Indeed, methods for creating partitioned user interfaces with menu bars and/or advertising were well known in the art before the '967 patent, as was constructing user interface elements from defined data structures that could be cached and switching between applications. For example, the CompuServe Navigator system was a prior art application that served as the user interface to the CompuServe Information Service. The Xerox Star user interface, well known as a groundbreaking advance in user interfaces—and prior art to the '967 patent—allowed users to switch between applications. Many of the claim limitations of the '967 patent claim basic concepts that were inherent in those and other technologies. The '849 patent adds little to this notion—merely reciting well-known limitations related to display and caching of advertising data, as well as identifying advertising targets by demographic or location. Indeed, much of this information is admitted as prior art. (*See* '849 patent at 2:20-30 (discussing the “conventional manner” of supplying advertising “from a host to a user site”), 10:23-27 (referencing “conventional marketing analysis techniques” for establishing “the user characterizations”)).

Methods for maintaining state information by embedding it in hyperlinks, as disclosed in the '601 patent, were also well known and used. For example, U.S. Patent 5,717,860 to Graber et al. discloses a method and apparatus for tracking the navigation path of a user that has been directed to a second site on the World Wide Web from a first site by maintaining navigation history in URLs. And the publication *HTML & CGI Unleashed* was a textbook that described, among other things, maintaining state information as part of the HTTP protocol. Among the many disclosed methods for maintaining state in this reference, one is through the use of state information embedded in URL data, including via use of a CGI query string. The reference also includes sample computer source code that performs the functions of the '601 patent, particularly as interpreted by IBM in its Preliminary Infringement Contentions.

The single-sign-on functionality of the '346 patent was also well known and used before the purported invention. For example, U.S. Patent No. 7,680,819 to Mellmer describes a system for managing digital identity information and the use of an “Autologin service,” which “logs a user in with the appropriate credentials when a user browses a web site that requests a username and password.” As a further example, Japanese Patent Application Publication No. 2004-302907 to Sunada discloses a system that can automatically generate user account information based on information at a single-sign-on server. IBM itself participated in an industry standards process for single sign-on functionality—the Liberty Alliance Project. Technical specifications published as part of that project describe the purportedly novel aspects of the '346 patent. Further, federated computing environments were well known at the time of the '346 patent and described, for example, in Doshi, Grandcolas, Harris, Moreh, Weissman, and Yared.

Creation of a user account as part of a single sign-on process was also obvious at the time of the '346 patent. Not only were single sign-on solutions well known (*see e.g.* Pfitzmann), but it was also well known that some services were available only to users with a user account (*see e.g.* '346 Patent at 1:28-30). It was also well known that a user account could be created on the fly. For example, Sunada discloses that “[i]f there is no user account, it obtains information regarding the user from the SSO server 1, uses attribute association information in the attribution association database 24 to automatically generate user account information, and registers it in the user account information database 23.” A person of ordinary skill in the art would have found it obvious to add an on-the-fly account creation step to known single sign-on solutions because it would have been applying a known technique to a known method to yield predictable results. Indeed, adding on-the-fly account creation functionality to the well-known single sign-on systems would have predictably added the convenience of an automatically-created account without

imposing additional steps or requirements on the user. Furthermore, users would have “expect[ed] that computer systems coordinate their actions so that burdens on the user are reduced.” (’346 Patent at 1:25-27). Any creation of an account on the fly would predictably reduce the burden on the user and permit the user to access certain resources that are only accessible to those with an account. Such automation of the account creation process is exactly the type of coordination between computer systems that users would have expected.

It would have also been obvious before the ’346 patent to commence creation of a user account prior to retrieving user attribute information for the user as part of the single sign-on operation. For example, Sunada discloses “[i]n a case where S35 determines that the user account does not exist, S36 inquires of the SSO server 1 for remote attribute information in the attribute association information which is housed in an attribute association database 24, like the one shown in Figure 2 for instance, and obtains the information.” (Sunada at 31.) Similarly, Pfizmann discloses multiple requests and responses for attributes, which would have yielded the predictable result of supplying additional information if it is determined that additional information is necessary. It would also have been obvious before the ’346 patent to complete creation of the user account after retrieving user attribute information as part of the single sign-on operation. For example, Sunada discloses “[u]pon putting together information necessary for creating the user account in this manner, S39 creates the user account information and registers it with the user account information database 23. With this, in a case where the access state is that of being logged in, the user account information now exists.” (Sunada at 35.) Adding such a concluding user account creation operation would allow the account to be created on the fly, which in turn would provide the predictable result of increasing the convenience for the user.

In *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), the Supreme Court held that prior art need not disclose the precise teachings of a patented invention to render it obvious because a court “can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.* at 418. The Supreme Court rejected the Federal Circuit’s prior rigid approach requiring “precise teachings directed to the specific subject matter of the challenged claim,” and held instead that the obviousness analysis requires consideration of “ordinary skill and common sense.” *Id.* at 418, 421. As the Court explained, “[i]t is common sense that familiar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* at 402. Under *KSR*, an explanation for why a combination of prior art items renders a claim obvious may be found in the “interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art” *Id.* at 418. The Supreme Court also rejected the view that the prior art references that are combined must address the same problem as the patented invention, stating that “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide reason for combining the elements” *Id.*

The references listed above, alone or in combination, contain an explicit and/or implicit teaching, suggestion, motivation, or inference to combine them due to the following: (1) the knowledge generally available to a person of ordinary skill in the art, (2) the prior art references as understood by a person of ordinary skill in the art, (3) the nature of the problem to be solved, (4) the fact that each prior art reference addresses similar problems, (5) the knowledge of those

skilled in the art that the disclosed components had been or could be used to implement various features.

The references related to the '967 patent all deal with the same technological field: they are related to the construction of user interfaces in a multiple application environment in which the user interface is constructed from data objects that may be stored locally. The references also address issues related to caching and switching between applications. *See, e.g., Caching Hints in Distributed Systems* by Douglas B. Terry; *An Information System Based on Distributed Objects* by Michael Caplinger (“Caplinger”); U.S. Patent No. 4,962,475 (“Hernandez”).

Similarly, the references related to the '849 patent all deal with the same technological field: they are related to the construction of user interfaces in a multiple application environment in which the user interface is constructed from data objects that may be locally stored and in which advertising information is stored and displayed to users. For example, *Videotex/Teletext: Principles & Practices* by Antone F. Alber describes the state of the art for videotex and teletext systems, the foundational technologies of both the '967 and '849 patents, as they existed in 1985. Alber describes the use of videotext for targeted advertising and the use of the NAPLPS protocol to construct user interfaces.

Many of the references for the '967 patent and the related '849 patent refer to one another or otherwise contain reasons that a person of ordinary skill in the art would combine them. For example, many of the references use similar language (i.e., “data objects,” “user interface”) to describe the construction and use of interfaces for applications. The references themselves discuss the benefits of applying their disclosures to existing prior art interactive computer systems, including networks, videotext, and so on. Because such similarities, *inter alia*, indicate that these references are all directed to the same or a similar technological field, a person of ordinary

skill in the art would naturally be aware of and combine these similar and well-known teachings of the references.

The references related to the '601 patent also all deal with the same technological field: maintenance of state information in networked environments that communicate using stateless protocols. These references also address issues related to resuming "conversations" using stored state information. For example, U.S. Patent No. 5,784,562 to Diener et al. describes an electronic document processing system in which a network communication connection between a server and client must be repeatedly re-established and the prior dialog session context re-associated with continued dialog session communications. The HTML & CGI Unleashed reference discloses the use of a CGI program to modify identified hyperlinks to include state information. Indeed, many of the prior art references provide a teaching or motivation to combine them to arrive at the alleged inventions claimed in the patents-in-suit. For example, the references describe both the same problem and similar solutions, and in many instances the same stateless protocol, HTTP. Such similarities indicate these references are all directed to the same or a similar technological field and a person of ordinary skill in the art would naturally be aware of and combine these similar and well-known teachings of the references.

The references related to the '346 patent also all deal with the same technological field: exchange of user information for single sign-on functionality and the creation of user accounts in a seamless manner in a federated computing environment. Many of the references provide a teaching or motivation to combine them to arrive at the alleged invention of the '346 patent. For example, the references describe both the same problem and similar solutions, and many use the same language to describe the problems and solutions, such as "automated login," "single sign-on", and "identity provider." Because such similarities, *inter alia*, indicate that these references

are all directed to the same or a similar technological field, a person of ordinary skill in the art would naturally be aware of and combine these similar and well-known teachings of the references.

For all of the patents-in-suit, the identified references, alone or in combination, also contain an explicit and/or implicit teaching, suggestion, motivation, or inference to combine them within the references themselves, as well as within the knowledge of those of ordinary skill in the art. These references identify and address the same technical issues and suggest similar solutions to those issues. Moreover, many of these references cross-reference and discuss one another, providing an explicit motivation to combine such references and further illustrating the close technical relationship among this group of references. Indeed, multiple references were authored or developed by the same person(s) and/or companies. If and to the extent that IBM challenges the applicability of any of these references with respect to particular limitations of the asserted claims of the patents-in-suit, Groupon reserves the right to supplement this disclosure to provide additional explanation for why particular references should and could be combined with one another. Groupon may also rely on expert testimony to establish that the asserted claims of the patents-in-suit are invalid as obvious.²

The combinations of references provided in the accompanying prior art reference charts in Exhibits A1-A24, B1-B26, C1-C15, and D1-18 are exemplary and are not intended to be exhaustive. Additional obviousness combinations of the references identified herein are possible, and Groupon reserves the right to use any such combination(s) in this litigation. In particular,

² The references identified in this section are only examples of the references that one of ordinary skill in the art would consider to be part of the same body of work and in same technical field and is not meant to be limiting in any way.

Groupon is currently unaware of IBM's allegations with respect to the level of skill in the art and the qualifications of the typical person of ordinary skill in the art. Groupon is also unaware of the extent, if any, to which IBM may contend that limitations of the claims at issue are not disclosed in the prior art identified by Groupon as anticipatory and the extent to which IBM will contend that elements not disclosed in the specifications of the patents-in-suit would have been known to persons of skill in the art. Groupon reserves the right to supplement this disclosure to identify other references that would have made such limitations obvious in view of the relevant disclosures.

B. 35 U.S.C. § 112

As noted below, some of the asserted claims of the patents-in-suit are invalid as indefinite (35 U.S.C. § 112 ¶ 2), lacking a proper written description (35 U.S.C. § 112 ¶ 1), and/or failing to enable one of ordinary skill in the art at the time the invention was made to make or use the alleged invention (35 U.S.C. § 112 ¶ 1). The following identification of claims and claim elements are only exemplary, and Groupon reserves the right to supplement the identification of claims and claim elements that do not comply with the requirements of 35 U.S.C. § 112. Specifically, Groupon reserves the right to identify additional claims and claim elements that do not comply with the requirements of 35 U.S.C. § 112 after the Court construes the claims in this case.

The '967 Patent

Claims 1-17 fail to comply with 35 U.S.C. § 112 ¶ 2 because a person of ordinary skill at the time of the invention would have been unable to distinguish between "applications," under IBM's apparent application of that term.

The phrase "the predetermined plan" in claim 4 fails to comply with 35 U.S.C. § 112 ¶ 2 because it lacks antecedent basis. Claims 4-9 are accordingly indefinite.

The phrase “the navigation procedures includes enabling the user to access a physical analogy of the available applications from which a desired application may be selected” fails to comply with 35 U.S.C. § 112 ¶ 2, rendering claim 8 indefinite.

Claims 1-17 fail to comply with 35 U.S.C. § 112 ¶ 1 in that the specification lacks support for a “computer network” or “network” to the extent that term is construed to encompass a reception system obtaining objects from anything other than a single central host computer.

The '849 Patent

Claims 1, 8, and 14 fail to comply with 35 U.S.C. § 112 ¶ 2 because a person of ordinary skill at the time of the invention would have been unable to distinguish between “applications,” under IBM’s apparent application of that term.

The terms “structuring applications” and “structuring advertising” fail to comply with 35 U.S.C. § 112 ¶ 1 because the specification fails to describe how applications or advertising may be “structured,” at least under IBM’s apparent construction.

The phrase “structuring advertising in a manner compatible to that of the applications” fails to comply with 35 U.S.C. § 112 ¶ 2 because, at least based on the apparent construction of this term in IBM’s Preliminary Infringement Contentions, it would not be clear to a person of ordinary skill in the art what it takes for the structure of advertising to be “compatible” with that of the applications.

The phrases “advertising object” and “advertising data” fail to comply with 35 U.S.C. § 112 ¶ 2 because, at least based on the apparent constructions adopted in IBM’s Preliminary Infringement Contentions, it would not be clear to a person of ordinary skill in the art how to distinguish “advertising object” from “advertising data.”

Claims 1-21 fail to comply with 35 U.S.C. § 112 ¶ 1 in that the specification lacks support for a “computer network” or “network” to the extent that term is construed to encompass a reception system obtaining objects from anything other than a single central host computer.

The '601 Patent

The phrase “filtering one of said hyperlinks and data output from said services according to a predetermined criteria” fails to comply with 35 U.S.C. § 112 ¶ 1 because the specification fails to describe how the filtering is performed, at least under IBM’s apparent construction.

The phrase “adding one of said hyperlinks and data to said output from said services according to a predetermined criteria” fails to comply with 35 U.S.C. § 112 ¶ 1 because the specification fails to describe how the filtering is performed, at least under IBM’s apparent construction.

The phrase “dynamically downloading computer program code to the client to perform said step of embedding which is responsive to said step of communicating the output to the client” fails to comply with 35 U.S.C. § 112 ¶ 1 because the specification fails to describe how the filtering is performed, at least under IBM’s apparent construction.

Claim 63 fails to comply with 35 U.S.C. § 112 ¶ 2 because the claim upon which it depends, Claim 60, requires communicating “a response including the continuations and embedded state information” meaning that communicating must occur after the embedding step. Claim 63 states that embedding occurs after (and responsive to) the communicating, which is impossible.

The '346 Patent

The phrase “back-channel information retrieval mechanism” fails to comply with 35 U.S.C. § 112 ¶ 2, rendering claim 8 indefinite.

C. 35 U.S.C. § 101

The asserted claims of the '967 patent are invalid under 35 U.S.C. § 101 for failure to recite patentable subject matter. Groupon incorporates by reference its arguments presented in the briefing for its motion for judgment on the pleadings. (D.I. 29, 39.) The asserted claims of the '849 patent are invalid under 35 U.S.C. § 101 for failure to recite patentable subject matter. Groupon incorporates by reference its arguments presented in the briefing for its motion for judgment on the pleadings. (D.I. 29, 39.) Depending on the Court's claim constructions in this case, on IBM's positions yet to be developed in this case, and on the *Priceline* case, the asserted claims of the '601 patent and the asserted claims of the '346 patent may also be invalid under 35 U.S.C. § 101 for failure to recite patentable subject matter.

II. ACCOMPANYING DOCUMENT PRODUCTION

Groupon is producing invalidating prior art references and corroborating evidence concerning prior art systems, including the prior art references described in this document and the attached exhibits. These prior art references and corroborating evidence are cited in and support the provided invalidity claim charts.

Groupon's search for prior art references, methods, systems, additional documentation, and/or corroborating evidence concerning prior art systems is ongoing. Accordingly, Groupon reserves the right to continue to supplement its production as Groupon obtains additional prior art references, documentation, and/or corroborating evidence concerning invalidity during the course of discovery. Groupon may further supplement its production once IBM complies with its discovery obligations, as described above.

Dated: February 22, 2017

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EXHIBIT B

**THIS EXHIBIT HAS BEEN
REDACTED IN ITS ENTIRETY**

EXHIBIT C

**THIS EXHIBIT HAS BEEN
REDACTED IN ITS ENTIRETY**

EXHIBIT D

**THIS EXHIBIT HAS BEEN
REDACTED IN ITS ENTIRETY**

EXHIBIT E

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

INTERNATIONAL BUSINESS MACHINES
CORPORATION,

Plaintiff,

v.

GROUPON, INC.

Defendant.

C.A. No. 16-122-LPS-CJB

JURY TRIAL DEMANDED

**DEFENDANT GROUPON, INC.'S SUPPLEMENTAL RESPONSES TO PLAINTIFF
INTERNATIONAL BUSINESS MACHINES CORPORATION'S FIRST, SECOND,
AND THIRD SETS OF INTERROGATORIES (NOS. 1, 2, 4, 7, 8, 9, 10, 13, AND 14)**

Pursuant to Federal Rules of Civil Procedure 26 and 33, Defendant Groupon, Inc. ("Groupon") hereby supplements its responses and objections to Plaintiff International Business Machines Corporation's ("IBM") First, Second, and Third Sets of Interrogatories (Nos. 1, 2, 4, 7, 8, 9, 10, 13, and 14) as follows:

INTERROGATORY NO. 2:

Separately for each Patent-in-Suit, describe in detail the circumstances surrounding Your first awareness of that patent (or any application relating to that patent) and any subsequent occasion that You were made aware of that patent (or any application relating to that patent) before IBM filed This Action, including the date of that awareness, the Persons involved, and the content of any related Communications or Documents.

RESPONSE TO INTERROGATORY NO. 2:

Subject to and without waiving any objections, Groupon responds as follows: Groupon first became aware of U.S. Patent Nos. 5,796,967 (“the ’967 patent”) and 7,072,849 (“the ’849 patent”) via communications with IBM on November 1, 2011. Groupon first became aware of U.S. Patent No. 5,961,601 via communications with IBM on April 13, 2012. Groupon first became aware of U.S. Patent No. 7,631,346 via communications with IBM on October 2, 2014. Investigation and discovery are ongoing, and Groupon reserves the right to supplement, amend, or modify its response to this Interrogatory as additional facts are learned and as otherwise appropriate.

SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 2:

Groupon incorporates by reference each of its General and Specific Objections to Interrogatory No. 2 set forth above. Subject to and without waiving its objections, Groupon further responds as follows: Pursuant to Fed. R. Civ. P. 33(d), information relevant to this Interrogatory may also be ascertained from GROUP028185-GROUP028261 and IBM-GROUPON10366899.

SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 2:

Groupon incorporates by reference each of its General and Specific Objections to Interrogatory No. 2 set forth above. Subject to and without waiving its objections, Groupon responds as follows: Groupon first became aware of U.S. Patent Nos. 5,796,967 and 7,072,849 via communications with IBM on November 1, 2011. Groupon first became aware of U.S. Patent No. 5,961,601 via communications with IBM on April 13, 2012. Groupon first became aware of U.S. Patent No. 7,631,346 via communications with IBM on August 11, 2014. Pursuant to Fed. R. Civ. P. 33(d), information relevant to this Interrogatory may also be ascertained from GROUP028185-GROUP028261, IBM-GROUPON10366899, and IBM-GROUPON10366812-IBM-GROUPON10366813.

INTERROGATORY NO. 4:

Separately for each instrumentality identified in response to Interrogatory No. 1, identify all associated revenues, costs, profits, funding, and the sources thereof on a month-by-month basis from March 2010 to the present, including any Transaction Events to which the revenues were attributed, the monetary value of gross profits, operating profits, net profits, or any other profit metric that You use, and the monetary value of gross revenue, operating revenue, net revenue, or any other revenue metric that You use.

RESPONSE TO INTERROGATORY NO. 4:

Subject to and without waiving any objections, Groupon responds as follows: After analysis of IBM's infringement contentions, to be served on January 20, 2017, Groupon will investigate and identify documents reflecting U.S.-based revenues, costs and profits derived from features of the Groupon instrumentalities accused of infringement as identified by IBM in its infringement contentions during the relevant time period, and will supplement its answer to this interrogatory as appropriate. Investigation and discovery are ongoing, and Groupon reserves the right to supplement, amend, or modify its response to this Interrogatory as additional facts are learned and as otherwise appropriate.

SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 4:

Groupon incorporates by reference each of its General and Specific Objections to Interrogatory No. 4 set forth above. Pursuant to Fed. R. Civ. P. 33(d), information relevant to this Interrogatory may be ascertained from GROUP0023766-GROUP0024761, GROUP0026426, GROUP0026427, GROUP026430, and GROUP026425, which reflects numbers for Groupon's Canadian business.

SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 4:

Groupon incorporates by reference each of its General and Specific Objections to Interrogatory No. 4 set forth above. Subject to and without waiving its objections, Groupon further responds as follows: Pursuant to Fed. R. Civ. P. 33(d), information relevant to this Interrogatory may also be ascertained from GROUP308191. Groupon also incorporates by reference its forthcoming responsive expert report regarding damages to be served on or before November 3, 2017.

INTERROGATORY NO. 9:

Separately, for each of Groupon's consumer platforms (desktop and mobile website, iOS, Android, and other mobile applications), on a monthly basis from November 2008 and continuing to the present, state the total number of Groupon consumer accounts created using each platform, the number of Groupon consumer accounts created using Facebook login credentials, and the number of Groupon consumer accounts created using Google login credentials.

RESPONSE TO INTERROGATORY NO. 9:

Subject to and without waiving any objections, Groupon responds as follows: Groupon does not track the number of consumer accounts created using different platforms, nor does it track whether they are created using Facebook login credentials or using Google login credentials. Investigation and discovery are ongoing, and Groupon reserves the right to supplement, amend, or modify its response to this Interrogatory as additional facts are learned and as otherwise appropriate.

SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 9:

Groupon incorporates by reference each of its General and Specific Objections to Interrogatory No. 9 set forth above. Pursuant to Fed. R. Civ. P. 33(d), information relevant to this Interrogatory may be ascertained from GROUP026429.

SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 9:

Groupon incorporates by reference each of its General and Specific Objections to Interrogatory No. 9 set forth above. Subject to and without waiving its objections, Groupon further responds as follows: Pursuant to Fed. R. Civ. P. 33(d), information relevant to this Interrogatory may also be ascertained from the Deposition Transcript of James Breen, specifically at 63:12-75:16; 78:3-81:23; 178:6-192:24. Groupon has investigated the data contained in GROUP026429 and confirms that the information contained therein is the best information that is available to Groupon on this subject.

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Dated: September 15, 2017

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CERTIFICATE OF SERVICE

I hereby certify that on this 15th day of September, 2017, a true and correct copy of the foregoing document was served on each party through their counsel of record via email.

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EXHIBIT F

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2016

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____

Commission file number: 1-35335

Groupon, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

27-0903295

(I.R.S. Employer
Identification No.)600 West Chicago Avenue, Suite 400
Chicago, Illinois

(Address of principal executive offices)

60654

(Zip Code)

312-334-1579

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, par value \$0.0001	Nasdaq Global Select Market

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes ☒ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.

Yes No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes ☒ NoIndicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes No ☒

As of June 30, 2016, the aggregate market value of shares held by non-affiliates of the registrant was \$1,313,716,295 based on the number of shares of common stock held by non-affiliates as of June 30, 2016 and based on the last reported sale price of the registrant's common stock on June 30, 2016.

As of February 13, 2017, there were 562,074,014 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

The information required by Part III of this Report, to the extent not set forth herein, is incorporated herein by reference from the registrant's definitive proxy statement relating to the Annual Meeting of Stockholders to be held in 2017, which definitive proxy statement shall be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year to which this Report relates.

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PART I

FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding our future results of operations and financial position, business strategy and plans and our objectives for future operations. The words "may," "will," "should," "could," "expect," "anticipate," "believe," "estimate," "intend," "continue" and other similar expressions are intended to identify forward-looking statements. We have based these forward looking statements largely on current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives, and financial needs. These forward-looking statements involve risks and uncertainties that could cause our actual results to differ materially from those expressed or implied in our forward-looking statements. Such risks and uncertainties include, but are not limited to, volatility in our revenue and operating results; risks related to our business strategy, including our strategy to grow our local marketplaces, marketing strategy and spend and the productivity of those marketing investments; effectively dealing with challenges arising from our international operations, including fluctuations in currency exchange rates and any potential adverse impact from the United Kingdom's likely exit from the European Union; retaining existing customers and adding new customers; retaining and adding high quality merchants; cyber security breaches; incurring expenses as we expand our business; competing successfully in our industry; maintaining favorable payment terms with our business partners; providing a strong mobile experience for our customers; delivery and routing of our emails; product liability claims; managing inventory and order fulfillment risks; integrating our technology platforms; litigation; managing refund risks; retaining, attracting and integrating members of our executive team; difficulties, delays or our inability to successfully complete all or part of the announced restructuring actions or to realize the operating efficiencies and other benefits of such restructuring actions; higher than anticipated restructuring charges or changes in the timing of such restructuring charges; completing and realizing the anticipated benefits from acquisitions, dispositions, joint ventures and strategic investments; tax liabilities; tax legislation; compliance with domestic and foreign laws and regulations, including the CARD Act and regulation of the Internet and e-commerce; classification of our independent contractors; maintaining our information technology infrastructure; protecting our intellectual property; maintaining a strong brand; seasonality; customer and merchant fraud; payment-related risks; our ability to raise capital if necessary and our outstanding indebtedness; global economic uncertainty; the impact of our ongoing strategic review and any potential strategic alternatives we may choose to pursue; our senior convertible notes; our ability to realize the anticipated benefits from the hedge and warrant transactions; and those risks and other factors discussed in "Item 1A: Risk Factors" of this Annual Report on Form 10-K, as well as in our consolidated financial statements, related notes, and the other financial information appearing elsewhere in this report and our other filings with the Securities and Exchange Commission, or the SEC. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. We do not intend, and undertake no obligation, to update any of our forward-looking statements after the date of this report to reflect actual results or future events or circumstances. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements.

As used herein, "Groupon," "we," "our," and similar terms include Groupon, Inc. and its subsidiaries, unless the context indicates otherwise.

ITEM 1: BUSINESS

Overview

Groupon is a global leader in local commerce, making it easy for people around the world to search and discover great businesses and merchandise. Our vision is to connect local commerce, increasing consumer buying power while driving more business to merchants through price and discovery. We want Groupon to be the destination that consumers check first when they are out and about, the place they start when they are looking to buy just about anything, anywhere, anytime. By leveraging our global relationships and scale, we provide consumers with savings and help them discover what to do, eat, see, buy and where to travel.

Groupon operates online local commerce marketplaces throughout the world that connect merchants to consumers by offering goods and services, generally at a discount. Consumers access those marketplaces through our websites, primarily localized groupon.com sites in many countries, and our mobile applications. Traditionally, local merchants have tried to reach consumers and generate sales through a variety of methods, including online advertising, paid telephone directories, direct mail,

newspaper, radio, television and other promotions. By bringing the brick and mortar world of local commerce onto the Internet, Groupon is helping local merchants to attract customers and sell goods and services.

Our operations are organized into three principal segments: North America, which represents the United States and Canada, EMEA, which is comprised of Europe, the Middle East and Africa, and the remainder of our international operations ("Rest of World"). We offer goods and services in three primary categories: Local Deals ("Local"), Groupon Goods ("Goods") and Groupon Getaways ("Travel"). We act as a marketing agent primarily by selling vouchers ("Groupons") that can be redeemed for products or services with third-party merchants. We also sell merchandise inventory directly to customers.

Our results from 2016 were impacted by the strategic initiatives discussed in Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations*. Those results include the following:

- Gross billings decreased to \$6.1 billion in 2016, as compared to \$6.3 billion in 2015. In 2016, 64.5%, 26.1% and 9.4% of our gross billings were generated in North America, EMEA and Rest of World, respectively, as compared to 59.3%, 28.7% and 12.0% in 2015. Gross billings represent the total dollar value of customer purchases of goods and services. Gross billings differs from our revenue, which is presented net of the merchant's share of the transaction price for transactions in which we act as a third-party marketing agent. Gross billings and revenue are the same for transactions in which we sell merchandise inventory directly to customers.
- Revenue of \$3.1 billion in 2016 was consistent with the prior year. In 2016, 68.5%, 26.3% and 5.2% of our revenue was generated in North America, EMEA and Rest of World, respectively, as compared to 65.6%, 27.8% and 6.6% in 2015.
- Gross profit of \$1.4 billion in 2016 was consistent with the prior year. In 2016, 65.3%, 26.7% and 8.0% of our gross profit was generated in North America, EMEA and Rest of World, respectively, as compared to 57.9%, 32.2% and 9.9% in 2015.
- Loss from operations was \$109.8 million in 2016, as compared to \$79.8 million in 2015.
- The number of active customers, which is defined as customers who have made a purchase on our platform within the last twelve months, increased to 52.7 million as of December 31, 2016 from 48.9 million as of December 31, 2015. Active customers for the year ended December 31, 2016 includes approximately 1.0 million incremental active customers from the acquisition of LivingSocial, Inc.

We are a Delaware corporation, incorporated on January 15, 2008 under the name "ThePoint.com, Inc." We started Groupon in October 2008 and officially changed our name to Groupon, Inc. by filing an amended certificate of incorporation on June 16, 2009. Our principal executive offices are located at 600 West Chicago Avenue, Suite 400, Chicago, Illinois 60654, and our telephone number at this address is (312) 334-1579. Our investor relations department can be reached through our investor relations hotline, which is (312) 999-3098. Our website is www.groupon.com. Information contained on our website is not a part of this Annual Report on Form 10-K. We completed our initial public offering in November 2011 and our common stock is listed on the Nasdaq Global Select Market under the symbol "GRPN."

GROUPON, the GROUPON logo and other GROUPON-formative marks are trademarks of Groupon, Inc. in the United States or other countries. This Annual Report on Form 10-K also includes other trademarks of Groupon and trademarks of other persons.

Our Strategy

Our goal is to build marketplaces that our customers rely on to discover and save on amazing things to do, eat, see, buy and where to travel. Key elements of our strategy for 2017 include the following:

Increasing our active customer base. We significantly increased our global marketing spend by \$108.6 million, or 42.7%, for the year ended December 31, 2016 as compared to the prior period in order to secure new customers and drive additional growth. We expect marketing will remain a key strategy in growing our customer base. Our online marketing campaigns are primarily focused on customer acquisition, customer retention and driving incremental sales. We are focusing our offline advertising activities on developing our brand strength and awareness.

Narrowing our focus and improving our operating efficiency. We have undertaken a number of actions to simplify and streamline our global business. We have reduced our global footprint from 47 countries as of December 31, 2014 to 24 countries

as of December 31, 2016, and by early 2017 we expect to focus our business on 15 core countries that we believe have the greatest potential to favorably impact our results of operations.

We continue to seek to improve our operating efficiency through a global initiative to integrate and streamline our technology platforms in order to provide a fast, stable and secure platform to support our business. Additionally, we are increasingly automating the system tools and capabilities for our functional teams to improve our overall operating efficiency. We expect to continue our efforts to streamline and simplify our business in the future.

Improving the customer experience. Improving the customer experience by growing the supply of offerings available through our marketplaces, continuing to invest in our mobile technology and creating a frictionless experience for our customers and merchants is a key strategy for increasing customer purchase frequency.

Following our transition from primarily a "push" business model that generated demand by emailing offers to customers to more of a demand fulfillment, or "pull," model that enables customers to search for goods and services on our websites and mobile applications, we continue to build our marketplaces and expand our supply of offers. By continuing to develop and expand our marketplaces and improve the search functionality of our websites and mobile applications, we seek to seamlessly connect our customers with great deals on local merchant offerings, merchandise and travel.

Investments in our mobile technology enable us to provide customers with new and innovative ways to discover our deal offerings across our platforms through browse, search, location, proximity, personalization and relevance, among others. Given the increasing quantity of offerings on our platforms, we believe that advances in connecting customers to our deal offerings will lead to higher conversion and overall strong customer satisfaction. Additionally, we believe that improving our mobile technology will help us capitalize on the continuing trend of consumers making purchases through smartphones, tablets and other mobile devices. In the fourth quarter of 2016, over 60% of our global transactions were completed on mobile devices and over 145 million people have downloaded our mobile applications worldwide as of December 31, 2016.

As we continue to build our marketplaces, we want our customers to have a superior, frictionless experience every time they use our product whether finding, booking, buying or redeeming an offer. For merchants, this includes providing capabilities to manage demand for their goods and services and improving their ability to acquire customers. For consumers, this includes easily finding offers and accessing features such as booking and takeout and delivery that augment the overall experience, as well as seamlessly purchasing and redeeming offers. We are currently investing in initiatives to improve the purchase and redemption experience, such as testing offerings with voucherless redemption resulting in cash back directly to customers' credit cards and adding direct booking tools for health and beauty offerings. We believe that these initiatives will ultimately increase customer purchase frequency and drive growth in our business.

Our Business

We earn revenue from transactions in which we provide marketing services primarily by selling vouchers through our online local marketplaces that can be redeemed for goods or services with a third-party merchant. Our third-party revenue from those transactions is reported on a net basis as the purchase price received from the customer for the voucher less an agreed upon portion of the purchase price paid to the merchant. We also earn revenue by selling merchandise inventory directly to customers through our online marketplaces. Our direct revenue from those transactions is the purchase price received from the customer.

Our business model has evolved in recent years from primarily an email-based "push" model with a limited number of deals offered at any given time to more extensive online "pull" marketplaces, where customers can come to Groupon's websites and mobile applications to search and browse for deals on goods and services. We also publish ratings and helpful tips from customers to highlight the unique aspects of local merchants, including merchants that have featured offerings through our marketplaces.

We offer goods and services through our online local marketplaces in three primary categories: Local, Goods and Travel. Collectively, Local and Travel comprise our "Services" offerings and Goods reflects our product offerings.

Local. Our Local category includes offerings from local and national merchants, as well as local events. Local also includes other revenue sources such as commission revenue and advertising revenue, as these revenue sources are primarily generated through our relationships with local and national merchants. Our local offerings comprise multiple subcategories, including events and activities, beauty and spa, health and fitness, food and drink, home and garden and automotive. National merchants also have used our marketplaces as an alternative to traditional marketing and brand advertising. Although our business today is weighted toward offerings from local merchants, we continue to feature offerings from national merchants to build our brand awareness, acquire new customers and generate additional revenue. In addition to local and national deals, we give customers

the ability to access digital coupons from thousands of retailers through our Coupons offering. We also offer deals on concerts, sports, theater and other live entertainment events through GrouponLive, which is a strategic partnership with LiveNation. We are increasingly featuring offerings on our site from other online marketplaces to further expand local offerings.

Goods. Our Goods category offers customers the ability to find deals on merchandise across multiple product lines, including electronics, sporting goods, jewelry, toys, household items and apparel. We expect that we will continue to add new brands to our platform in order to expand our offerings.

In our Goods category, we earn direct revenue from transactions in which we sell merchandise inventory directly to customers, as well as third-party revenue from transactions in which we act as a marketing agent and sell vouchers that can be redeemed for products with a third-party merchant. Goods transactions in our North America and EMEA segments are primarily direct revenue transactions, whereas Goods transactions in our Rest of World segment are primarily third-party revenue transactions.

Travel. Through our Travel category, we feature travel offers at both discounted and market rates, including hotels, airfare and package deals covering both domestic and international travel. For many of our travel offerings, the customer must contact the merchant directly to make a travel reservation after purchasing a travel voucher from us. However, for some of our hotel offerings, customers make room reservations directly through our websites.

Distribution

Our customers access our online local commerce marketplaces through our mobile applications and our websites, which primarily consist of localized groupon.com sites in countries throughout the world. We use a variety of marketing channels to direct customers to the deal offerings available through these marketplaces, as described in the "Marketing" section below.

Consumers predominately access our offerings through our mobile applications and, to a lesser extent, through mobile web browsers. Our applications and mobile websites enable consumers to browse, purchase, manage and redeem deals on their mobile devices. In addition, the mobile experience leverages location in several ways, enabling consumers to filter by distance, discover deals near them and visualize the assortment of Groupon offers through a maps view. In the fourth quarter of 2016, over 60% of our global transactions were completed on mobile devices.

Marketing

We primarily use marketing to acquire customers and promote awareness of our marketplaces and the services and product offerings available through those marketplaces. Consequently, marketing is an important part of our growth strategy and remains a key element of our business operations. We significantly increased our global marketing spend by \$108.6 million, or 42.7%, for the year ended December 31, 2016 as compared to the prior period. We expect to continue to invest in marketing in future periods in connection with our efforts to accelerate customer growth.

We use a variety of marketing channels to make customers aware of the deal offerings on our mobile and web platforms, including search engines, through search engine optimization ("SEO") and marketing ("SEM"), email, affiliate channels, display advertising and offline marketing, which increased significantly during 2016.

Search engines. Customers can access our deal offerings indirectly through third-party search engines. We use SEO and SEM to increase the visibility of our offerings in web search results.

Email. In North America and most of our international markets, we use targeting technology to determine which deal offerings to communicate to our email subscribers based on their locations and personal preferences. A subscriber who clicks on a deal offering within an email is directed to our website or mobile application to learn more about the deal and make a purchase.

Social and display. We publish deals through various social networks and adapt our notifications to the particular format of each of these social networking platforms. Our websites and mobile application interfaces enable consumers to push notifications of our deals to their personal social networks. We also promote our deals using display advertising on websites.

Affiliate channels. We have an affiliate program that utilizes third parties to promote our deal offerings online. Affiliates earn commissions when customers access our deal offerings through links on their websites and make purchases on our platform. We expect to continue to leverage affiliate relationships to extend the distribution of our deals to a broad base of potential customers.

Television and offline. In 2016, we significantly increased the extent to which we use offline marketing such as television advertising, and to a lesser extent, radio advertising.

Our marketing activities also include elements that are not presented as "Marketing" on our consolidated statements of operations, such as order discounts and free shipping on qualifying merchandise sales.

Sales and Operations

Our sales force consists of approximately 3,100 merchant sales representatives and sales support staff, who build merchant relationships and provide local expertise. Our North American merchant sales representatives and support staff are primarily based in our offices in Chicago and Phoenix, and our international merchant sales representatives and support staff are based in their respective local offices. Our global sales and sales support headcount by segment as of December 31, 2016 was as follows:

North America	1,131
EMEA	1,295
Rest of World	682
Total	3,108

Other key operational functions include deal managers, editorial, merchant services, customer service, technology, merchandising and logistics. Deal managers work with sales teams to optimize deal structure and pricing, as well as manage the category, discount and geographic mix of deals in their respective markets. Our editorial department is responsible for creating the written and visual content on the deals we offer. Merchant services representatives work with merchants to plan for increased customer traffic before an offering is active and serve as an ongoing point of contact for the merchant over the term of a deal. Our customer service department is responsible for answering questions received via phone, email and on public discussion boards regarding purchases, shipping status, returns and other areas of customer inquiry. Our technology team is focused on the design and development of new features and products, maintenance of our websites and development and maintenance of our internal systems. Merchandising and logistics personnel are responsible for managing inventory and the flow of products from suppliers to our customers.

Our websites are hosted at U.S. data centers in Santa Clara and Sacramento, California and international data centers in Asia and Europe. Our data centers host our public-facing websites and applications, as well as our back-end business intelligence systems. We employ security practices to protect and maintain the systems located at our data centers. We have invested in intrusion and anomaly detection tools to try to recognize intrusions to our websites. We engage independent third-party Internet security firms to regularly test the security of our websites and identify vulnerabilities. In financial transactions with customers conducted on our websites and mobile applications, we use data encryption protocols to secure information while in transit. See "*Risk Factors*" for additional information relating to cyber threats.

Competition

Our business is rapidly evolving and we face competition from a variety of sources. Some of our competitors offer deals as an add-on to their core business, and others have adopted a business model similar to ours. In addition to such competitors, we expect to increasingly compete against other large Internet and technology-based businesses that have launched initiatives which are directly competitive to our core business. We also expect to compete against other Internet sites that are focused on specific communities or interests and offer coupons or discount arrangements related to such communities or interests. Further, as our business continues to evolve, we anticipate facing new competition. We believe the principal competitive factors in our markets include the following:

- size and composition of our customer base and the number of merchants that we feature;
- mobile penetration;
- understanding of local business trends;
- ability to structure deals to generate positive return on investment for merchants;
- quality and performance of our merchants;
- ability to generate large volumes of sales; and

- reputation, strength and recognition of brand.

Although we believe that we compete favorably on the factors described above and benefit from scale, we anticipate that larger, more established companies may directly compete with us over time. Many of our current and potential competitors have longer operating histories, significantly greater financial, technical, marketing and other resources and larger customer bases than we do. These factors may allow our competitors to benefit from their existing customer base with lower acquisition costs or to respond more quickly than we can to new or emerging technologies and changes in customer requirements. These competitors may engage in more extensive research and development efforts, undertake more far-reaching marketing campaigns and adopt more aggressive pricing policies, which may allow them to build a larger subscriber base or to monetize that subscriber base more effectively than we do. Our competitors may develop products or services that are similar to our products and services or that achieve greater market acceptance than our products and services.

Seasonality

Some of our offerings experience seasonal buying patterns mirroring that of the larger consumer retail and e-commerce markets, where demand declines during customary summer vacation periods and increases during the fourth quarter holiday season. We believe that this seasonality pattern has affected, and will continue to affect, our business and quarterly sequential revenue growth rates. We recognized 29.7% , 29.4% and 29.0% of our annual revenue during the fourth quarter of 2016 , 2015 and 2014 , respectively.

Regulation

We are subject to a number of foreign and domestic laws and regulations that affect companies conducting business on the Internet. Additionally, these laws and regulations may be interpreted differently across domestic and foreign jurisdictions. As a company in a relatively new and rapidly innovating industry, we are exposed to the risk that many of these laws may evolve or be interpreted by regulators or in the courts in ways that could materially affect our business. These laws and regulations may involve taxation, unclaimed property, intellectual property, product liability, travel, distribution, electronic contracts and other communications, competition, consumer protection, the provision of various online payment services, employee, merchant and customer privacy and data security or other areas.

The Credit Card Accountability Responsibility and Disclosure Act of 2009 (the "CARD Act"), as well as the laws of most states, contain provisions governing gift cards, gift certificates, stored value or pre-paid cards or coupons ("gift cards"). Groupon vouchers may be included within the definition of "gift cards" under many laws. In addition, certain foreign jurisdictions have laws that govern disclosure and certain product terms and conditions, including restrictions on expiration dates and fees that may apply to Groupon vouchers. There are also a number of legislative proposals pending before the U.S. Congress, various state legislative bodies and foreign governments that could affect us, and our global operations may be constrained by regulatory regimes and laws in Europe and other jurisdictions outside the United States that may be more restrictive and adversely impact our business.

Various U.S. laws and regulations, such as the Bank Secrecy Act of 1970 (the "Bank Secrecy Act"), the Dodd-Frank Wall Street Reform and Consumer Protection Act, the USA PATRIOT Act and the CARD Act impose certain anti-money laundering requirements on companies that are financial institutions or that provide financial products and services. These laws and regulations broadly define financial institutions to include money services businesses such as money transmitters, check cashers and sellers or issuers of stored value. Requirements imposed on financial institutions under these laws include customer identification and verification programs, record retention policies and procedures and transaction reporting. We do not believe that we are a financial institution subject to these laws and regulations.

Intellectual Property

We protect our intellectual property rights by relying on federal, state and common law rights, as well as contractual restrictions. We control access to our proprietary technology by entering into confidentiality and invention assignment agreements with our employees and contractors, and confidentiality agreements with third parties.

In addition to these contractual arrangements, we also rely on a combination of trade secrets, copyrights, trademarks, service marks, trade dress, domain names and patents to protect our intellectual property. Groupon and its related entities own a number of trademarks and service marks registered or pending in the United States and internationally. In addition, we own a number of issued patents and pending patent applications in the United States and internationally and own and have applied for copyright registrations.

Circumstances outside our control could pose a threat to our intellectual property rights and the efforts we have taken

to protect our proprietary rights may not be sufficient or effective or deter independent development of equivalent or superior intellectual property rights by others. Any significant impairment of our intellectual property rights could harm our business or our ability to compete. Also, protecting our intellectual property rights is costly and time-consuming. Any unauthorized disclosure or use of our intellectual property could make it more expensive to do business and harm our operating results.

Companies in the Internet, technology and other industries as well as non-practicing entities may own large numbers of patents, copyrights and trademarks or other intellectual property rights and may request license agreements, threaten litigation or file suit against us based on allegations of infringement or other violations of intellectual property rights. We are currently subject to, and expect to face in the future, lawsuits and allegations that we have infringed the intellectual property rights of third parties. As our business grows, we will likely face more claims of infringement, and may experience an adverse result which could impact our business and/or our operating results.

We have received in the past, and we anticipate we will receive in the future, communications alleging that items offered or sold through our website infringe third-party copyrights, trademarks, patents and trade names or other intellectual property rights or that we have otherwise infringed third parties' past, current or future intellectual property rights. We may be unable to prevent third parties from offering and selling unlawful or infringing goods, and we may be subject to allegations of civil or criminal liability for unlawful activities carried out by third parties through our website. We may implement measures in an effort to protect against these potential liabilities that could require us to spend substantial resources and/or to reduce revenues by discontinuing certain service offerings. Any costs incurred as a result of liability or asserted liability relating to the sale of unlawful goods or the unlawful sale of goods could harm our business.

Employees

As of December 31, 2016, there were 3,493 employees in our North America segment, consisting of 1,131 sales representatives and 2,362 corporate, operational and customer service representatives, 2,528 employees in our EMEA segment, consisting of 1,295 sales representatives and 1,233 corporate, operational and customer service representatives, and 2,302 employees in our Rest of World segment, consisting of 682 sales representatives and 1,620 corporate, operational and customer service representatives.

Executive Officers

The following table sets forth information about our executive officers:

Name	Age	Position
Rich Williams	41	Chief Executive Officer and Director
Michael Randolfi	44	Chief Financial Officer
Dane Drobny	49	General Counsel and Corporate Secretary
Brian Stevens	42	Chief Accounting Officer and Treasurer
Jay Sullivan	49	Chief Product Officer

Rich Williams has served as our Chief Executive Officer and a member of our Board of Directors since November 2015. Prior to this role, Mr. Williams served as our Chief Operating Officer since June 2015 and President of North America since October 2014. He joined the Company in June 2011 as Senior Vice President of Marketing. Prior to joining Groupon, Mr. Williams served in a variety of marketing leadership roles at Amazon.com, Inc. (NASDAQ: AMZN) from January 2008 to June 2011, most recently as the Director, Paid Traffic leading global advertising. Prior to joining Amazon, he spent nearly seven years in sales and marketing leadership roles at Experian plc (LSE: EXPN), a global information services company.

Michael Randolfi has served as our Chief Financial Officer since April 2016. Prior to joining Groupon, Mr. Randolfi served as the Chief Financial Officer of Orbitz Worldwide, Inc. (NYSE:OWW) from March 2013 until November 2015 (when he departed following its acquisition by Expedia, Inc.). Prior to joining Orbitz, Mr. Randolfi served as Vice President and then as Senior Vice President and Controller at Delta Air Lines (NYSE: DAL) from February 2008 to February 2013. From June 1999 to February 2008, he held various executive positions at Delta Air Lines in financial planning and analysis, controllership and treasury. Prior to his 14-year career at Delta, Mr. Randolfi held positions with Continental Airlines (NYSE: UAL) and Raymond James and Associates (NYSE: RJF). Mr. Randolfi is a CPA and a certified management accountant.

Dane Drobny has served as our General Counsel and Corporate Secretary since July 2014. Prior to joining Groupon, Mr. Drobny was Senior Vice President, General Counsel and Corporate Secretary at Sears Holdings Corporation (NASDAQ: SHLD) from May 2010 to June 2014. Prior to joining Sears Holdings, he spent 17 years at the international law firm of Winston & Strawn LLP, most recently as a partner.

Brian Stevens has served as our Chief Accounting Officer and Treasurer since May 2016 and as our Chief Accounting Officer since September 2012. Prior to joining Groupon, Mr. Stevens spent 16 years with KPMG LLP, most recently as a partner. Mr. Stevens spent five years in KPMG's Department of Professional Practice and was a practice fellow at the Financial Accounting Standards Board from 2006 to 2008. Mr. Stevens is a member of the American Institute of Certified Public Accountants and serves on its Financial Reporting Executive Committee (FinREC).

Jay Sullivan has served as our Chief Product Officer since December 2015. Prior to this role, Mr. Sullivan served as our Senior Vice President, Product from January 2015 to December 2015. Prior to joining Groupon, Mr. Sullivan was the Chief Operating Officer and Interim Chief Executive Officer of Mozilla Corporation from April 2013 to July 2014, Senior Vice President, Product from April 2010 to April 2013 and served in a variety of other senior-level roles at Mozilla Corporation since October 2007.

Available Information

The Company electronically files reports with the SEC. The public may read and copy any materials the Company has filed with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site (www.sec.gov) that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC. Copies of the Company's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 are also available free of charge through the Company's website (www.groupon.com), as soon as reasonably practicable after electronically filing with or otherwise furnishing such information to the SEC, and are available in print to any stockholder who requests them. The Company's Code of Conduct, Corporate Governance Guidelines and committee charters are also posted on the site. The Company uses its Investor Relations website (investor.groupon.com) and its blog (<https://www.groupon.com/blog>) as a means of disclosing material non-public information and for complying with its disclosure obligations under Regulation FD. Information contained on our website and blog is not a part of this Annual Report on Form 10-K.

ITEM 1A. RISK FACTORS

Our business, prospects, financial condition, operating results and the trading price of our common stock could be materially adversely affected by any of these risks, as well as other risks not currently known to us or that we currently consider immaterial. In assessing the risks described below, you should also refer to the other information contained in this Annual Report on Form 10-K, including Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) and the consolidated financial statements and the related notes in Part II, Item 8. Financial Statements and Supplementary Data of this Annual Report on Form 10-K.

Risks Related to Our Business

Our revenue and operating results may continue to be volatile.

Our revenue and operating results may continue to vary from quarter to quarter due to seasonality and other reasons such as the rapidly evolving nature of our business. We believe that our revenue growth and ability to achieve and maintain profitability will depend, among other factors, on our ability to:

- acquire new customers and retain existing customers;
- attract and retain quality merchants;
- effectively address and respond to challenges in international markets;
- expand the number, variety and relevance of products and deals we offer, particularly as we attempt to build a more complete local marketplace;

- achieve additional mobile adoption to capitalize on customers' continued shift toward mobile device usage;
- increase the awareness of our brand;
- successfully achieve the anticipated benefits of business combinations or acquisitions, strategic investments, divestitures and restructuring activities;
- provide a superior customer service experience for our customers;
- avoid interruptions to our services, including as a result of cybersecurity breaches;
- respond to continuous changes in consumer and merchant use of technology;
- react to challenges from existing and new competitors; and
- respond to seasonal changes in supply and demand.

In addition, our margins and profitability may depend on our product sales mix, our geographic revenue mix and merchant pricing terms. For example, sales in our Goods category, which typically carry lower margins than sales in our Local category, may grow faster in certain periods relative to other categories, which may result in lower margins and profitability during those periods. Accordingly, our profitability may vary significantly from quarter to quarter.

Our strategy to grow our marketplaces may not be successful and may expose us to additional risks.

One of our key objectives is to expand upon our traditional daily deals business by building out more extensive local commerce marketplaces. This strategy has required us to devote significant resources to attracting and retaining merchants who are willing to run deals on a continuous basis with us in order to build a significant inventory for our customers, as well as continuing management focus and attention. We have accepted, and expect to continue to accept, a lower portion of the gross billings from some of our merchants as we expand our marketplaces. In addition, we are continuously refining our process for presenting the most relevant deals to our customers based on their personal preferences and location. We are also continuing our efforts to optimize the mix of products in our Goods category, including lower margin product offerings. If we are not successful in achieving these objectives, our business, financial position and results of operations could be harmed.

Our international operations are subject to increased challenges, and our inability to adapt to the varied commercial and regulatory landscapes of our international markets may adversely affect our business.

Our ability to continue to grow our business in our international markets requires management attention and resources and requires us to localize our services to conform to a wide variety of local cultures, business practices, laws and policies. The different commercial and Internet infrastructure in other countries may make it more difficult for us to replicate our business model. In many countries, we compete with local companies that understand the local market better than we do, and we may not benefit from first-to-market advantages. We are subject to risks of doing business internationally, including the following:

- our ability to maintain merchant and customer satisfaction such that our marketplace will continue to attract high quality merchants;
- our ability to successfully respond to macroeconomic challenges, including by optimizing our deal mix to take into account consumer preferences at a particular point in time;
- political, economic and civil instability and uncertainty (including acts of terrorism, civil unrest, labor unrest, violence and outbreaks of war);
- currency exchange rate fluctuations;
- strong local competitors, many of whom have been in the market longer than we have or have greater resources in the local market;
- different regulatory or other legal requirements, including regulation of gift cards and coupon terms, Internet services, professional selling, distance selling, bulk emailing, privacy and data protection, cybersecurity, business licenses and certifications, the types of services we may offer, banking and money transmitting, that may limit or prevent the

offering of our services in some jurisdictions, cause unanticipated compliance expenses or limit our ability to enforce contractual obligations;

- difficulties in integrating with local payment providers, including banks, credit and debit card networks and electronic funds transfer systems;
- different employee/employer relationships and the existence of workers' councils and labor unions;
- difficulty in staffing, developing and managing foreign operations as a result of distance, language barriers and cultural differences;
- shorter payment cycles and greater problems in collecting accounts receivable;
- higher Internet service provider costs;
- seasonal reductions in business activity;
- expenses associated with localizing our products, including offering customers the ability to transact business in the local currency; and
- differing intellectual property laws.

We are subject to complex foreign and U.S. laws and regulations that apply to our international operations, including data privacy and protection requirements, the Foreign Corrupt Practices Act, the UK Anti-Bribery Act and similar local laws prohibiting certain payments to government officials, banking and payment processing regulations, and anti-competition regulations, among others. The cost of complying with these various, and sometimes conflicting, laws and regulations is substantial. We have implemented policies and procedures to ensure compliance with these laws and regulations, however, we cannot ensure that our employees, contractors, or agents will not violate our policies. Changing laws, regulations and enforcement actions in the United States and throughout the world could harm our business. If commercial and regulatory constraints in our international markets restrict our ability to conduct our operations or execute our strategic plan, our business may be adversely affected.

Economic conditions and regulatory changes leading up to and following the United Kingdom's likely exit from the European Union could have a material adverse effect on our business and results of operations.

In June 2016, the United Kingdom (the "U.K.") held a non-binding referendum in which voters approved an exit from the European Union (the "E.U."), commonly referred to as "Brexit." As a result of the referendum, the British government has begun negotiating the terms of the U.K.'s withdrawal from the E.U. The effects of Brexit will depend on any agreements the U.K. may make to retain access to E.U. markets either during a transitional period or more permanently. A withdrawal could, among other outcomes, disrupt the free movement of goods, services and people between the U.K. and the E.U., undermine bilateral cooperation in key policy areas and significantly disrupt trade between the U.K. and the E.U. In addition, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations as the U.K. determines which E.U. laws to replace or replicate. Given the lack of comparable precedent, it is unclear what financial, trade and legal implications the withdrawal of the U.K. from the E.U. would have and how such withdrawal would affect us.

The announcement of Brexit caused significant volatility in global stock markets and currency exchange rate fluctuations that resulted in the strengthening of the U.S. dollar against foreign currencies in which we conduct business. The strengthening of the U.S. dollar relative to other currencies may adversely affect our operating results.

The announcement of Brexit and the withdrawal of the U.K. from the E.U. may also create global economic uncertainty, which may cause consumers to reduce their spending. In addition, Brexit may lead other E.U. member countries to consider referendums regarding their E.U. membership. Any of these effects of Brexit, among others, could adversely affect our business, financial condition, operating results and cash flows.

Our financial results may be adversely affected if we are unable to execute on our marketing strategy.

Our marketing strategy is focused on customer acquisition, activation and conversion, purchase frequency and mobile application downloads, as well as increasing awareness of our brand, including our online marketplaces. We increased our marketing expense to \$363.0 million during 2016 as compared to \$254.3 million during 2015. We expect our marketing expense as a percentage of gross billings to remain relatively consistent in 2017 as we continue to focus on new customer acquisition. If any of our assumptions regarding our marketing activities and strategies prove incorrect, our ability to generate profits from our investments may be less than we anticipated. In such case, we may need to increase expenditures or otherwise alter our strategy and our results of operations could be negatively impacted.

If we fail to retain our existing customers or acquire new customers, our revenue and business will be harmed.

We must continue to retain and acquire customers that make purchases on our platform in order to increase revenue and achieve consistent profitability. As our customer base continues to evolve, the composition of our customers may change in a manner that makes it more difficult to generate revenue to offset the loss of existing customers and the costs associated with acquiring and retaining customers. If customers do not perceive our offerings to be attractive or if we fail to introduce new and more relevant deals or increase awareness of our marketplaces, we may not be able to retain or acquire customers at levels necessary to grow our business and profitability. If we are unable to acquire new customers in numbers sufficient to grow our business and offset the number of existing active customers that have ceased to make purchases, or if new customers (including unique customers from our acquisition of LivingSocial, Inc.) do not make purchases at expected levels, our revenue may decrease and our operating results may be adversely affected.

Our future success depends upon our ability to attract and retain high quality merchants.

We must continue to attract and retain high quality merchants in order to increase revenue and profitability. We depend on our ability to attract and retain merchants that are prepared to offer products or services on compelling terms through our marketplaces and provide our customers with a good experience. We do not have long-term arrangements to guarantee the availability of deals that offer attractive quality, value and variety to customers or favorable payment terms to us. Currently, when a merchant works with us to offer a deal for its products or services, it receives an agreed-upon portion of the total proceeds from each voucher sold and we retain the rest. If merchants decide that utilizing our services no longer provides an effective means of attracting new customers or selling their goods and services, they may stop working with us or require a higher portion of the total proceeds from each voucher or product sold. We also have seen that some competitors will accept lower margins, or negative margins, to attract attention and acquire new customers. If competitors engage in group buying initiatives in which merchants receive a higher portion of the purchase price than we currently offer, or if we target merchants who will only agree to run deals if they receive a higher portion of the proceeds, we may receive a lower portion of the gross billings on deals offered through our marketplaces. In addition, we may experience attrition in our merchants in the ordinary course of business resulting from several factors, including losses to competitors and merchant closures or bankruptcies. If we are unable to attract new and retain high quality merchants in numbers sufficient to grow our business, or if merchants are unwilling to offer products or services with compelling terms through our marketplaces or offer favorable payment terms to us, our operating results may be adversely affected.

We may be subject to breaches of our information technology systems, which could harm our relationships with our customers and merchants, subject us to negative publicity and litigation, and cause substantial harm to our business.

In operating a global online business, we and our third-party service providers maintain significant proprietary information and manage large amounts of personal data and confidential information about our employees, customers and merchants. Because of our high profile and the number of customer records we maintain, we and the third-party providers are at an increased risk of a security breach, whether through cyber-attack or cyber intrusion via the Internet, malware, computer viruses, phishing, attachments to e-mails, hacking, persons inside our organization with access to our systems, or other significant disruption of our information technology networks and related systems. Any failure to prevent or mitigate cybersecurity breaches or other improper access to, or disclosure of, our data or confidential information could result in the loss or misuse of such data or information.

Our risk and exposure to these matters remains heightened because of, among other things, the evolving nature of these threats, our prominent size and scale, the large number of transactions that we process, our payment processing, our geographic footprint and international presence, our use of open source software, the complexity of our systems, the maturity of our risk management framework, the extent to which our current systems, controls, processes and practices permit us to detect, log and monitor security events, our use of cloud based technologies, the outsourcing of some of our business operations and continued threats of cyber-attacks. Although cybersecurity and the continued development and enhancement of our controls, processes and practices designed to protect our systems, computers, software, data and networks from attack, damage or unauthorized access are a high priority for us, this may not successfully protect our systems against all vulnerabilities, including technologies developed

to bypass our security measures. In addition, outside parties may attempt to fraudulently induce employees, merchants or customers to disclose sensitive information in order to gain access to our secure systems and networks. We also may be subject to additional vulnerabilities as we integrate the systems, computers, software and data of acquired businesses into our networks and separate the systems, computers, software and data of disposed businesses from our networks.

As cyber threats continue to evolve, and as we continue to evaluate and assess our systems and the controls, processes and practices to protect those systems, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any information security vulnerabilities. These modifications and enhancements may take significant time to implement. Further, because the techniques used to gain access to, or sabotage, systems often are not recognized until launched against a target, we may be unable to anticipate the correct methods necessary to defend against these types of attacks. Any actual breach, the perceived threat of a breach or a perceived breach, could cause our customers, merchants, card brands and payment card processors to cease doing business with us, subject us to lawsuits, regulatory fines or other action or liability or damage to our reputation, which would harm our business, financial condition and results of operations.

We may incur losses in the future as we expand our business.

We had an accumulated deficit of \$1,099.0 million as of December 31, 2016. We anticipate that our financial results will be negatively impacted as we continue to invest in our growth, by increasing our marketing spending and accepting a lower portion of the proceeds from third-party revenue transactions, as we attempt to increase our active customer base and add more merchants to our marketplaces. Our expansion efforts may prove more difficult than we currently anticipate, and we may not succeed in realizing the benefits of these efforts in a short time frame, or at all. Many of our efforts to generate revenue are new and unproven and are in highly competitive businesses. Any failure to increase our revenue, as well as any changes in our mix of sales between our higher and lower margin categories, could prevent us from attaining or increasing, or could reduce, our profitability. We cannot be certain that we will be able to attain or increase profitability on a quarterly or annual basis. If we are unable to effectively manage these risks and difficulties as we encounter them, our business, financial condition and results of operations may suffer.

We operate in a highly competitive industry with relatively low barriers to entry and must compete successfully in order to grow our business.

We expect competition in our industry to continue to increase. A substantial number of e-commerce sites that attempt to replicate our business model are operating around the world. In addition to such competitors, we expect increased competition from other large businesses who offer deals similar to ours as an add-on to their core business. We also compete with other companies that offer digital coupons through their websites or mobile applications. Further, we compete against other e-commerce companies that serve niche markets and interests. In some of our categories, such as goods, travel and entertainment, we compete against much larger companies who have more resources and significantly greater scale. In addition, we compete with traditional offline coupon and discount services, as well as newspapers, magazines and other traditional media companies who provide coupons and discounts on products and services.

We believe that our ability to compete successfully depends upon many factors both within and beyond our control, including the following:

- the size and composition of our customer base and the number of merchants we feature;
- mobile penetration;
- understanding local business trends;
- ability to structure deals to generate positive return on investment for merchants;
- the timing and market acceptance of deals we offer, including the developments and enhancements to those deals offered by us or our competitors;
- customer and merchant service and support efforts;
- selling and marketing efforts;
- ease of use, performance, price and reliability of services offered either by us or our competitors;

- our ability to generate large volumes of sales;
- the number, quality and reliability of the digital coupons we offer;
- the quality and performance of our merchants;
- our ability to cost-effectively manage our operations; and
- our reputation and brand strength relative to our competitors.

Many of our current and potential competitors have longer operating histories, greater financial, marketing and other resources and larger customer bases than we do. These factors may allow our competitors to benefit from their existing customer base with lower customer acquisition costs or to respond more quickly than we can to new or emerging technologies and changes in consumer habits. These competitors may engage in more extensive research and development efforts, undertake more far-reaching marketing campaigns and adopt more aggressive pricing policies, which may allow them to build larger customer bases or generate revenue from their customer bases more effectively than we do. Our competitors may offer deals that are similar to the deals we offer or that achieve greater market acceptance than the deals we offer. This could attract customers away from our websites and mobile applications, reduce our market share and adversely impact our gross margins. In addition, we are dependent on some of our existing or potential competitors for display advertisements and other marketing initiatives to acquire new customers. Our ability to utilize their platforms to acquire new customers may be adversely affected if they choose to compete more directly with us or prevent us from using their services.

Our operating cash flow and results of operations could be adversely impacted if we change our merchant payment terms or our revenue does not grow.

Our merchant payment terms and revenue growth have historically provided us with operating cash flow to fund our working capital needs. Our merchant arrangements are generally structured such that we collect cash up front when our customers purchase vouchers or products and we make payments to merchants at a subsequent date, either on a fixed schedule or upon redemption by customers. We currently pay merchants upon redemption for many deals in our international markets, but we may continue to move toward offering payments on a fixed schedule in those markets.

We have used the operating cash flow provided by our merchant payment terms and revenue growth to fund our working capital needs. If we offer merchants more favorable or accelerated payment terms or our revenue does not grow in the future, our operating cash flow and results of operations could be adversely impacted and we may have to seek alternative financing to fund our working capital needs.

Our success is dependent upon our ability to provide a superior mobile experience for our customers, and our customers' continued ability to access our offerings through mobile devices.

In the fourth quarter of 2016, over 60% of our global transactions were completed on mobile devices. Additionally, over 145 million people have downloaded our mobile applications worldwide as of December 31, 2016. In order to continue to grow our mobile transactions, it is critical that our applications are compatible with a range of mobile technologies, systems, networks and standards. Our business may be adversely affected if our customers choose not to access our offerings on their mobile devices or use mobile devices that do not offer access to our mobile applications or if we fail to develop applications with adequate functionality on a wide range of mobile devices.

Our business depends on our ability to maintain and improve the technology infrastructure necessary to send our emails and operate our websites, mobile applications and transaction processing systems, and any significant disruption in service on our email network infrastructure, websites, mobile applications or transaction processing systems could result in a loss of customers or merchants.

Customers access our marketplaces through our websites and mobile applications, as well as via emails that are often targeted by location, purchase history and personal preferences. Customers can also access our deal offerings indirectly through third-party search engines. Our reputation and ability to acquire, retain and serve our current customers and potential customers are dependent upon the reliable performance of our websites, mobile applications, email delivery and transaction processing systems and the underlying network infrastructure. Our systems may not be adequately designed with the necessary reliability and redundancy to avoid performance delays or outages that could be prolonged and harmful to our business. If our websites or mobile applications are unavailable when users attempt to access them, or if they do not load as quickly as expected, users may not return as often in the future, or at all. As our customer base and the amount of information shared on our websites and mobile

applications continue to grow, we will need an increasing amount of network capacity and computing power. We have spent and expect to continue to spend substantial amounts on data centers and equipment and related network infrastructure and services to handle the traffic on our websites and mobile applications and to help shorten the time of or prevent system interruptions. The operation of these systems is expensive and complex and could result in operational failures. Interruptions, delays or failures in these systems, whether due to earthquakes, adverse weather conditions, other natural disasters, power loss, computer viruses, cybersecurity attacks, physical break-ins, terrorism, errors in our software or otherwise, could be prolonged and could affect the security or availability of our websites and applications, and prevent our customers from accessing our services. If we do not maintain or expand our network infrastructure successfully or if we experience operational failures or prolonged disruptions or delays in the availability of our systems or a significant search engine, we could lose current and potential customers and merchants, which could harm our operating results and financial condition.

In addition, a portion of our network infrastructure is hosted by third-party providers. Any disruption or failure of these providers to handle existing or increased traffic and transactions could significantly harm our business. Any financial or other difficulties these providers face may adversely affect our business, and we exercise little control over these providers, which increases our vulnerability to problems with the services they provide.

If our emails are not delivered and accepted, or are routed by email providers less favorably than other emails, our business may be substantially harmed.

If email providers implement new or more restrictive email delivery policies it may become more difficult to deliver emails to our customers. For example, certain email providers, including Google, categorize our emails as "promotional," and these emails are directed to an alternate, and less readily accessible, section of a customer's inbox. If email providers materially limit or halt the delivery of our emails, or if we fail to deliver emails to customers in a manner compatible with email providers' email handling or authentication technologies, our ability to contact customers through email could be significantly restricted. In addition, if we are placed on "spam" lists or lists of entities that have been involved in sending unwanted, unsolicited emails, our operating results and financial condition could be substantially harmed.

We purchase and sell some products from indirect suppliers, which increases our risk of litigation and other losses.

We source merchandise both directly from brand owners and indirectly from retailers and third-party distributors, and we often take title to the goods before we offer them for sale to our customers. Further, some brand owners, retailers and third-party distributors may be unwilling to offer products for sale on the Internet or through Groupon in particular, which could have an adverse impact on our ability to source and offer popular products. By selling merchandise sourced from parties other than the brand owners, we are subject to an increased risk that the merchandise may be damaged or unauthentic, which could result in potential liability under applicable laws, regulations, agreements and orders, and increase the amount of returned merchandise or customer refunds. In addition, brand owners may take legal action against us. Even if we prevail, any such legal action could result in costly litigation, generate adverse publicity for us, and have a material adverse impact on our business, financial condition and results of operations. Further, in any such matter, we may not be entitled to indemnification from our supplier, or able to effectively enforce the supplier's contractual indemnification obligations.

We may be subject to product liability claims if people or property are harmed by the products we sell.

Some of the products we sell may expose us to product liability claims relating to personal injury, death, or environmental or property damage, and may require product recalls or other actions. Certain third parties also sell products using our e-commerce platform that may increase our exposure to product liability claims, such as if these sellers do not have sufficient protection from such claims. Although we maintain liability insurance, we cannot be certain that our coverage will be adequate for liabilities actually incurred or that insurance will continue to be available to us on economically reasonable terms, or at all. In addition, some of our agreements with our vendors and sellers do not indemnify us from product liability or we may not be able to effectively enforce our contractual indemnification rights.

We are subject to inventory management and order fulfillment risks as a result of our Goods category.

We purchase a portion of the merchandise that we offer for sale to our customers. The demand for products can change for a variety of reasons, including customer preference, quality, seasonality, and customers' perception of the value of purchasing the product through us. If we are unable to adequately predict customer demand and efficiently manage our inventory, we could have either an excess or a shortage of inventory, either of which would adversely impact our business.

It is important that we fulfill orders on a timely, efficient and cost-effective basis. Many other online retailers have significantly larger inventory balances and therefore are able to rely on past experience and economies of scale to optimize their

order fulfillment. Because we rely on third-party logistics providers for much of our order fulfillment and delivery, many parts of our supply chain are outside our control. Delays or inefficiencies in our processes, or those of our third-party logistics providers, could subject us to additional costs, as well as customer dissatisfaction, which would adversely affect our business. Additionally, in some cases we assume the risks of inventory damage, theft and obsolescence, as well as risks of price erosion for these products. These risks are especially significant because some of the merchandise we sell is characterized by seasonal trends, fashion trends, obsolescence and price erosion and because we sometimes make large purchases of particular types of inventory. Our success will depend on our ability to sell our inventory rapidly, the ability of our buying staff to purchase inventory at attractive prices relative to its resale value and our ability to manage customer returns and other costs. If we are unsuccessful in any of these areas, we may be forced to sell our inventory at a discount or loss.

The integration and separation of certain international operations with our North American technology platform may result in business interruptions.

We currently use a common technology platform in our North America segment to operate our business. We have substantially implemented this platform in most EMEA countries and are in the process of introducing this platform to certain countries in our Rest of World segment. In addition, we also expect to continue to separate from this platform certain businesses that are part of our international restructuring effort. Such changes to our technology platform and related software carry risks such as cost overruns, project delays and business interruptions and delays. If we experience a material business interruption as a result of this process, it could have a material adverse effect on our business, financial position and results of operations.

We are involved in pending litigation and an adverse resolution of such litigation may adversely affect our business, financial condition, results of operations and cash flows.

We are involved in litigation regarding, among other matters, patent, consumer and employment issues. Litigation can be expensive, time-consuming and disruptive to normal business operations. The results of complex legal proceedings are often uncertain and difficult to predict. An unfavorable outcome with respect to any of these lawsuits could have a material adverse effect on our business, financial condition, results of operations and cash flows. For additional information regarding these and other lawsuits in which we are involved, see Note 10, *Commitments and Contingencies*, to the consolidated financial statements.

An increase in our refund rates could reduce our liquidity and profitability.

As we increase our revenue and expand our product offerings, our customer refund rates may exceed historical levels. A downturn in general economic conditions may also increase our refund rates. An increase in our refund rates could significantly reduce our liquidity and profitability.

We estimate future refunds utilizing a statistical model that incorporates historical refund experience, including the relative risk of refunds based on transaction value and deal category. Our actual level of refund claims could prove to be greater than the level of refund claims we estimate. If our refund reserves are not adequate to cover future refund claims, this inadequacy could have a material adverse effect on our profitability.

Our standard agreements with merchants generally limit the time period during which we may seek reimbursement for customer refunds or claims. Our customers may make claims for refunds with respect to which we are unable to seek reimbursement from merchants. Our inability to obtain reimbursement from merchants for refund claims could have an adverse effect on our liquidity and profitability.

The loss of one or more key members of our management team, or our failure to attract, integrate and retain other highly qualified personnel in the future could harm our business.

In order to be successful, we must attract, retain and motivate executives and other key employees, including those in managerial, technical and sales positions. Hiring and retaining qualified executives, engineers and qualified sales representatives are critical to our success, and competition for experienced and well qualified employees can be intense. In order to attract and retain executives and other key employees in a competitive marketplace, we must provide a competitive compensation package, including cash and share-based compensation. Our primary form of share-based incentive award is restricted stock units. If the anticipated value of such share-based incentive awards does not materialize, if our share-based compensation otherwise ceases to be viewed as a valuable benefit or if our total compensation package is not viewed as competitive, our ability to attract, retain and motivate executives and key employees could be weakened. The failure to successfully hire executives and key employees or the loss of any executives and key employees could have a significant impact on our operations.

An increase in the costs associated with maintaining our international operations could adversely affect our results of operations.

Certain factors may cause our international costs of doing business to exceed our comparable costs in North America. For example, in some countries, expanding our product and service offerings may require a close commercial relationship with one or more local banks, a shared ownership interest with a local entity or registration as a bank under local law. Such requirements may reduce our revenue, increase our costs or limit the scope of our activities in particular countries.

Further, because our international revenue is denominated in foreign currencies, we could become subject to increased difficulties in repatriating money without adverse tax consequences and increased risks relating to foreign currency exchange rate fluctuations. For example, the U.S. dollar has appreciated significantly against the Euro in recent periods. Further, we could be subject to the application of U.S. tax rules to acquired international operations and local taxation of our fees or of transactions on our websites.

We conduct portions of certain functions, including technology and product development, customer support and other operations, in regions outside of North America. Any factors which reduce the anticipated benefits, including cost efficiencies and productivity improvements, associated with providing these functions outside of North America, including increased regulatory costs associated with our international operations, could adversely affect our business.

Our restructuring plan could be disruptive to our operations and adversely affect our results of operations and financial condition, and we may not realize some or all of the anticipated benefits of this plan in the time frame anticipated or at all.

In the third quarter of 2015, our Board of Directors approved a restructuring plan relating primarily to workforce reductions in our international operations. In addition to the workforce reductions in our ongoing markets during 2015 and 2016, we ceased operations in five countries during 2016 in connection with the restructuring plan. We expect this plan to be substantially complete by June 2017. The implementation of the restructuring plan, including the impact of workforce reductions, could be disruptive to our operations, make it difficult to attract or retain employees, result in higher than anticipated charges, create issues relating to data retention and access to our data or systems and otherwise adversely affect our results of operations and financial condition. In addition, our ability to complete the restructuring plan and achieve the anticipated benefits from the plan within the expected time frame or at all is subject to estimates and assumptions and may vary materially from our expectations, including as a result of factors that are beyond our control. Furthermore, following completion of the restructuring plan, our business may not be more efficient or effective than prior to implementation of the plan.

Acquisitions, dispositions, joint ventures and strategic investments could result in operating difficulties, dilution and other consequences.

We routinely evaluate and consider a wide array of potential strategic transactions, including acquisitions and dispositions of businesses, joint ventures, technologies, services, products and other assets and minority investments. The pursuit and consummation of such transactions can result in operating difficulties, dilution, management distraction and other potentially adverse consequences. We have in the past acquired and divested a number of companies and may complete additional transactions in the future. In particular, as previously announced we continue to explore strategic alternatives in our international business to streamline our operations and reduce our geographic footprint.

Acquisitions involve significant risks and uncertainties, including uncertainties as to the future financial performance of the acquired business and the performance of acquired customers, valuation of the acquired business and integration risks such as difficulties integrating acquired personnel into our business, the potential loss of key employees, customers or suppliers, difficulties in integrating different computer, payment and accounting systems and exposure to unknown or unforeseen liabilities of acquired companies. In addition, the integration of an acquisition could divert management's time and the Company's resources. If we pay for an acquisition or a minority investment in cash, it would reduce our cash available for operations or cause us to incur debt, and if we pay with our stock it could be dilutive to our stockholders. Additionally, we do not have the ability to exert control over our minority investments, and therefore we are dependent on others in order to realize their potential benefits. Dispositions and attempted dispositions also involve significant risks and uncertainties, such as the risk of destabilizing the applicable operations, the loss of key personnel, the terms and timing of any dispositions, the ability to obtain necessary governmental or regulatory approvals, post-disposal disputes and indemnification obligations and risks and uncertainties with respect to the separation of disposed operations, including, for example, transition services, access by purchasers to certain of our systems and tools during transition periods, the migration of data and separation of systems, data privacy matters and misuse of trademarks and intellectual property. We may be unable to successfully complete potential strategic transactions or dispositions on a timely basis or at all, or we may not realize the anticipated benefits of any of our strategic transactions in the time frame expected or at all. Further, if we are unable to complete dispositions of international businesses, we may incur additional costs to wind down or liquidate these businesses.

We may not have the ability to exert control over our minority investments, and therefore we are dependent on others in order to realize their potential benefits.

We currently hold non-controlling minority investments in Monster Holdings LP ("Monster LP"), GroupMax Pte Ltd. ("GroupMax") and other entities and we may make additional strategic minority investments in the future. Such minority investments inherently involve a lesser degree of control over business operations, thereby potentially increasing the financial, legal, operational and/or compliance risks associated with the investments. Our partners in these investments may have business goals and interests that are not aligned with ours, or may exercise their rights in a manner in which we do not approve. These circumstances could lead to delayed decisions or disputes and litigation with our partners, all of which could have a material adverse impact on our reputation, business, financial condition and results of operations.

Both Monster LP and GroupMax have been pursuing growth strategies in which they are spending significantly on marketing and offering customer incentives that frequently result in low or negative margins. Those strategies, which are consistent with the business plans contemplated at the time Monster LP and GroupMax received third-party investments in May 2015 and August 2015, respectively, have generated significant operating losses and negative cash flows as the entities build their respective active customer bases. If Monster LP or GroupMax seek additional financing in order to fund their growth strategies, such financing transactions may result in dilution of our ownership stakes and they may occur at lower valuations than the investment transactions in 2015 through which we acquired such interests, which could significantly decrease the fair values of our investments in those entities. For example, the fair value of Monster LP implied by the terms of an equity financing transaction in December 2016 was lower than its estimated fair value in previous periods, which resulted in a significant decrease in the fair value of our investment in that entity. Additionally, if Monster LP or GroupMax are unable to obtain any such financing, those entities could need to significantly reduce their spending and use of customer incentives in order to fund their operations. Such actions likely would result in reduced growth forecasts, which also could significantly decrease the fair values of our investments in those entities.

We may be subject to additional unexpected regulation which could increase our costs or otherwise harm our business.

The application of certain laws and regulations to Groupons, as a new product category, is uncertain. These include laws and regulations such as the CARD Act, and, in certain instances, potentially unclaimed and abandoned property laws. In addition, from time to time, we may be notified of additional, or developments in existing, laws and regulations which governmental organizations or others may claim should be applicable to our business. If we are required to alter our business practices as a result of any laws and regulations, our revenue could decrease, our costs could increase and our business could otherwise be harmed. In addition, the costs and expenses associated with defending any actions related to such additional laws and regulations and any payments of related penalties, judgments or settlements could adversely impact our profitability. To the extent that we expand into new lines of business and new geographies, we will become subject to additional laws and regulations.

We may have exposure to greater than anticipated tax liabilities.

We are subject to income taxes in the United States (federal and state) and numerous foreign jurisdictions. Tax laws, regulations, and administrative practices in various jurisdictions may be subject to significant change due to economic, political, and other conditions, and significant judgment is required in evaluating and estimating our provision and accruals for these taxes. Our income tax obligations are based on our corporate operating structure, including the manner in which we develop, value and use our intellectual property and the scope of our international operations.

The tax laws applicable to our domestic and international business activities, including the laws of the United States and other jurisdictions, are subject to interpretation. The taxing authorities of the jurisdictions in which we operate may challenge our methodologies for valuing developed technology or intercompany arrangements, which could increase our worldwide effective tax rate and harm our financial position and results of operations. In addition, there are many transactions that occur during the ordinary course of business for which the ultimate tax determination is uncertain. Our effective tax rates could be adversely affected by earnings being lower than anticipated in jurisdictions where we have lower statutory rates and higher than anticipated in jurisdictions where we have higher statutory rates, losses incurred in jurisdictions for which we are not able to realize the related tax benefits, changes in foreign currency exchange rates, entry into new businesses and geographies and changes to our existing businesses, acquisitions (including integrations) and investments, changes in our deferred tax assets and liabilities and their valuation and changes in the relevant tax, accounting and other laws, regulations, administrative practices, principles and interpretations, including fundamental changes to the tax laws applicable to corporate multinationals. The U.S., many countries in the European Union, and a number of other countries are actively considering changes in this regard. Developments in an audit, litigation or the relevant laws, regulations, administrative practices, principles and interpretations could have a material effect on our financial position, operating results and cash flows in the period or periods for which that development occurs, as well as for prior and subsequent periods.

We also are subject to regular review and audit by both U.S. federal and state and foreign tax authorities. Any adverse outcome of such a review or audit could have a negative effect on our financial position and results of operations. In addition, the determination of our worldwide provision for income taxes and other tax liabilities requires significant judgment by management, and there are many transactions where the ultimate tax determination is uncertain. Although we believe that our estimates are reasonable, the ultimate tax outcome may differ from the amounts recorded in our financial statements and may materially affect our financial results in the period or periods for which such determination is made.

The enactment of legislation implementing changes in the U.S. taxation of international business activities or the adoption of other tax reform policies could materially affect our financial position and results of operations.

Certain changes to U.S. tax laws, including limitations on the ability to defer U.S. taxation on earnings outside of the United States until those earnings are repatriated to the United States, could affect the tax treatment of our foreign earnings, as well as cash and cash equivalent balances we currently maintain outside of the United States. Due to the large scale of our international business activities, any changes in the U.S. taxation of such activities may increase our worldwide effective tax rate and harm our financial position and results of operations.

The implementation of the CARD Act and similar state and foreign laws may harm our business and results of operations.

It is not clear at this time, but Groupons may be considered gift cards, gift certificates, stored value cards or prepaid cards and therefore governed by, among other laws, the CARD Act, and state laws governing gift cards, stored value cards and coupons. Other foreign jurisdictions have similar laws in place, in particular European jurisdictions where the European E-Money Directive regulates the business of electronic money institutions. Many of these laws contain provisions governing the use of gift cards, gift certificates, stored value cards or prepaid cards, including specific disclosure requirements and prohibitions or limitations on the use of expiration dates and the imposition of certain fees. For example, if our vouchers are subject to the CARD Act and are not included in the exemption for promotional programs, it is possible that the purchase value, which is the amount equal to the price paid for the Groupon, or the promotional value, which is the add-on value of the Groupon in excess of the price paid, or both, may not expire before the later of (i) five years after the date on which the Groupon was issued; (ii) the Groupon's stated expiration date (if any); or (iii) a later date provided by applicable state law. In the event that it is determined that Groupons are subject to the CARD Act or any similar state or foreign law or regulation, and are not within various exemptions that may be available under the CARD Act or under some of the various state or foreign jurisdictions, our liabilities with respect to unredeemed Groupons may be materially higher than the amounts shown in our financial statements and we may be subject to additional fines and penalties. In addition, if federal or state laws require that the face value of Groupons have a minimum expiration period beyond the period desired by a merchant for its promotional program, or no expiration period, this may affect the willingness of merchants to issue Groupons in jurisdictions where these laws apply.

If we are required to materially increase the estimated liability recorded in our financial statements with respect to unredeemed Groupons, our results of operations could be materially and adversely affected.

In certain states and foreign jurisdictions, Groupons may be considered a gift card. Some of these states and foreign jurisdictions include gift cards under their unclaimed and abandoned property laws which require companies to remit to the government the full value or a portion of the value of the unredeemed balance on the gift cards after a specified period of time (generally between one and five years) and impose certain reporting and record-keeping obligations. We do not remit any amounts relating to unredeemed vouchers based on our assessment of applicable laws. The analysis of the potential application of the unclaimed and abandoned property laws to Groupons is complex, involving an analysis of constitutional and statutory provisions and factual issues, including our contractual relationship with customers and merchants and our role as it relates to the marketing and delivery of a Groupon. In the event that one or more states or foreign jurisdictions successfully challenges our position on the application of its unclaimed and abandoned property laws to Groupons, or if the estimates that we use in projecting the likelihood of Groupons being redeemed prove to be inaccurate, our liabilities with respect to unredeemed Groupons may be materially higher than the amounts shown in our financial statements. If we are required to materially increase the estimated liability recorded in our financial statements with respect to unredeemed vouchers, our net income could be materially and adversely affected. Moreover, a successful challenge to our position could subject us to penalties or interest on unreported and unremitted sums, and any such penalties or interest would have a further material adverse impact on our results of operations.

Government regulation of the Internet and e-commerce is evolving, and unfavorable changes or failure by us to comply with these regulations could substantially harm our business and results of operations.

We are subject to general business regulations and laws as well as regulations and laws specifically governing the Internet

and e-commerce. Existing and future regulations and laws could impede the growth of the Internet or other online services. These regulations and laws may involve taxation, tariffs, subscriber privacy, anti-spam, data protection, content, reference pricing, copyrights, distribution, electronic contracts and other communications, consumer protection, the provision of online payment services and the characteristics and quality of services. The application of existing laws governing issues such as property ownership, sales and other taxes, libel and personal privacy to the Internet is not clear as the vast majority of these laws were adopted prior to the advent and do not contemplate or address the unique issues raised by the Internet or e-commerce. In addition, it is possible that governments of one or more countries may seek to censor content available on our websites and mobile applications or may even attempt to completely block our emails or access to our websites. Adverse legal or regulatory developments could substantially harm our business. In particular, in the event that we are restricted, in whole or in part, from operating in one or more countries, our ability to retain or increase our customer base may be adversely affected and we may not be able to maintain or grow our revenue as anticipated.

New tax treatment of companies engaged in Internet commerce may adversely affect the commercial use of our services and our financial results.

Due to the global nature of the Internet, it is possible that various states or foreign countries might attempt to regulate our transmissions or levy sales, income or other taxes relating to our activities. Tax authorities at the international, federal, state and local levels are currently reviewing the appropriate treatment of companies engaged in Internet commerce. New or revised international, federal, state or local tax regulations may subject us or our customers to additional sales, income and other taxes. We cannot predict the effect of current attempts to impose sales, income or other taxes on commerce over the Internet. New or revised taxes and, in particular, sales taxes, VAT and similar taxes would likely increase the cost of doing business online and decrease the attractiveness of advertising and selling goods and services over the Internet. New taxes could also create significant increases in internal costs necessary to capture data, and collect and remit taxes. Any of these events could have an adverse effect on our business and results of operations.

Failure to comply with federal, state and international privacy laws and regulations, or the expansion of current or the enactment of new privacy laws or regulations, could adversely affect our business.

A variety of federal, state and international laws and regulations govern the collection, use, retention, sharing and security of consumer data. The existing privacy-related laws and regulations are evolving and subject to potentially differing interpretations. In addition, various federal, state and foreign legislative and regulatory bodies may expand current or enact new laws regarding privacy matters. For example, the recent adoption by the European Union of the European General Data Protection Regulation may require burdensome and significant operational changes and expense as compliance with the May 2018 enforcement date approaches. We have posted privacy policies and practices concerning the collection, use and disclosure of subscriber data on our websites and applications. Several Internet companies have incurred substantial penalties for failing to abide by the representations made in their privacy policies and practices. In addition, several states have adopted legislation that requires businesses to implement and maintain reasonable security procedures and practices to protect sensitive personal information and to provide notice to consumers in the event of a security breach resulting in a loss or likely loss of personal information. Any failure, or perceived failure, by us to comply with our posted privacy policies or with any data-related consent orders, Federal Trade Commission requirements or orders or other federal, state or international privacy or consumer protection-related laws, regulations or industry self-regulatory principles could result in claims, proceedings or actions against us by governmental entities or others or other liabilities, which could adversely affect our business. In addition, a failure or perceived failure to comply with industry standards or with our own privacy policies and practices could result in a loss of subscribers or merchants and adversely affect our business. Federal, state and international governmental authorities continue to evaluate the privacy implications inherent in the use of third-party web "cookies" for behavioral advertising. The regulation of these cookies and other current online advertising practices could adversely affect our business.

Misclassification or reclassification of our independent contractors or employees could increase our costs and adversely impact our business.

Our workers are classified as either employees or independent contractors, and if employees, as either exempt from overtime or non-exempt (and therefore overtime eligible). Regulatory authorities and private parties have recently asserted within several industries that some independent contractors, including those in the food ordering and delivery industry, should be classified as employees and that some exempt employees, including those in sales-related positions, should be classified as non-exempt based upon the applicable facts and circumstances and their interpretations of existing rules and regulations. If we are found to have misclassified employees as independent contractors or non-exempt employees as exempt, we could face penalties and have additional exposure under federal and state tax, workers' compensation, unemployment benefits, labor, employment and tort laws, including for prior periods, as well as potential liability for employee overtime and benefits and tax withholdings. Legislative, judicial, or regulatory (including tax) authorities could also introduce proposals or assert interpretations of existing rules and

regulations that would change the classification of a significant number of independent contractors doing business with us from independent contractor to employee and a significant number of exempt employees to non-exempt. A reclassification in either case could result in a significant increase in employment-related costs such as wages, benefits and taxes. The costs associated with employee classification, including any related regulatory action or litigation, could have a material adverse effect on our results of operations and our financial position.

We are exposed to potential legal claims based on the nature of our food ordering and delivery business.

We are exposed to potential legal claims relating to our food ordering and delivery business, including potential claims related to food offerings, delivery and quality. For example, third parties could assert legal claims against us in connection with personal injuries related to food poisoning or tampering or accidents caused by the delivery drivers or other injuries or harm caused by delivery drivers. Litigation can be expensive, time-consuming and disruptive to normal business operations, so if these types of claims arise, they could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We may suffer liability as a result of information retrieved from or transmitted over the Internet and claims related to our service offerings.

We may be, and in certain cases have been, sued for defamation, civil rights infringement, negligence, patent, copyright or trademark infringement, invasion of privacy, personal injury, product liability, breach of contract, unfair competition, discrimination, antitrust reference pricing or other legal claims relating to information that is published or made available on our websites or service offerings we make available (including provision of an application programming interface platform for third parties to access our website, mobile device services and geolocation applications). This risk is enhanced in certain jurisdictions outside the United States, where our liability for such third-party actions may be less clear and we may be less protected. In addition, we could incur significant costs in investigating and defending such claims, even if we ultimately are not found liable. If any of these events occurs, our net income could be materially and adversely affected.

We are subject to risks associated with information disseminated through our websites and mobile applications, including consumer data, content that is produced by our editorial staff and errors or omissions related to our product offerings. Such information, whether accurate or inaccurate, may result in our being sued by our merchants, subscribers or third parties and as a result our revenue and goodwill could be materially and adversely affected.

We may not be able to adequately protect our intellectual property rights or may be accused of infringing intellectual property rights of third parties.

We regard our trademarks, service marks, copyrights, patents, trade dress, trade secrets, proprietary technology, merchant lists, subscriber lists, sales methodology and similar intellectual property as critical to our success, and we rely on trademark, copyright and patent law, trade secret protection and confidentiality and/or license agreements with our employees and others to protect our proprietary rights. Effective intellectual property protection may not be available in every country in which our deals are made available. We also may not be able to acquire or maintain appropriate domain names or trademarks in all countries in which we do business. Furthermore, regulations governing domain names may not protect our trademarks and similar proprietary rights. We may be unable to prevent third parties from acquiring and using domain names or trade names that are similar to, infringe upon or diminish the value of our trademarks and other proprietary rights. We may be unable to prevent third parties from using and registering our trademarks, or trademarks that are similar to, or diminish the value of, our trademarks in some countries.

We may not be able to discover or determine the extent of any unauthorized use of our proprietary rights. Third parties that license our intellectual property rights also may take actions that diminish the value of our proprietary rights or reputation. The protection of our intellectual property may require the expenditure of significant financial and managerial resources. Moreover, the steps we take to protect our intellectual property may not adequately protect our rights or prevent third parties from infringing or misappropriating our proprietary rights. We are currently subject to multiple lawsuits and disputes related to our intellectual property and service offerings. We may in the future be subject to additional litigation and disputes. The costs of engaging in such litigation and disputes are considerable, and there can be no assurances that favorable outcomes will be obtained.

We are currently subject to third-party claims that we infringe upon proprietary rights or trademarks and expect to be subject to additional claims in the future. Such claims, whether or not meritorious, may result in the expenditure of significant financial and managerial resources, injunctions against us or the payment of damages by us. We may need to obtain licenses from third parties who allege that we have infringed their rights, but such licenses may not be available on terms acceptable to us or at all. These risks have been amplified by the increase in third parties whose sole or primary business is to assert such claims.

Our business depends on a strong brand, and if we are not able to maintain and enhance our brand, or if we receive unfavorable media coverage, our ability to expand our base of customers and merchants could be impaired and our business and operating

results could be harmed.

We believe that the brand identity that we have developed has significantly contributed to the success of our business. We also believe that maintaining and enhancing the "Groupon" brand is critical to expanding our base of customers and merchants. Maintaining and enhancing our brand may require us to make substantial investments and these investments may not be successful. If we fail to promote, maintain and protect the "Groupon" brand, or if we incur excessive expenses in this effort, our business, operating results and financial condition will be materially and adversely affected. We anticipate that, as our market becomes increasingly competitive, maintaining and enhancing our brand may become increasingly difficult and expensive. Maintaining and enhancing our brand will depend largely on our ability to continue to provide reliable, trustworthy and high quality offerings on our online marketplaces, which we may not do successfully.

We receive a high degree of media coverage around the world. Unfavorable publicity or consumer perception of our websites, mobile applications, practices or service offerings, or the offerings of our merchants or their products, could adversely affect our reputation, resulting in difficulties in recruiting, decreased revenue and a negative impact on the number of merchants we feature and the size of our customer base, the loyalty of our customers and the number and variety of deals we offer each day. As a result, our business, financial condition and results of operations could be materially and adversely affected.

Our business may be subject to seasonal sales fluctuations which could result in volatility or have an adverse effect on the market price of our common stock.

Our business has been and is expected to continue to be subject to sales seasonality. This seasonality may cause our working capital cash flow requirements to vary from quarter to quarter depending on the variability in the volume and timing of sales. These factors, among other things, make forecasting more difficult and may adversely affect our ability to manage working capital and to predict financial results accurately, which could adversely affect the market price of our common stock.

Failure to deal effectively with fraudulent transactions and customer disputes would increase our loss rate and harm our business.

Groupons are issued in the form of redeemable vouchers with unique identifiers. It is possible that consumers or other third parties will seek to create counterfeit vouchers in order to fraudulently purchase discounted goods and services from merchants. While we use advanced anti-fraud technologies, it is possible that criminals will attempt to circumvent our anti-fraud systems using increasingly sophisticated methods. In addition, our service could be subject to employee fraud or other internal security breaches, and we may be required to reimburse customers and/or merchants for any funds stolen or revenue lost as a result of such breaches. Merchants could also request reimbursement, or stop offering goods or services on our marketplaces, if they are affected by buyer fraud or other types of fraud.

We may incur significant losses from fraud and counterfeit vouchers. Additionally, we may incur losses from claims that the customer did not authorize a purchase, from credit card fraud, from merchant fraud, from erroneous transmissions, and from customers who have closed bank accounts or have insufficient funds in them to satisfy payments. We also may incur losses as a result of purchases made with fraudulent credit card information, even if the associated financial institution approved payment of the transaction. In addition to the direct costs of any such losses, if the losses are related to credit card transactions and become excessive, they could potentially result in our losing the right to accept credit cards for payment. If we were unable to accept credit cards for payment, we would suffer substantial reductions in revenue, which would cause our business to suffer. While we have taken measures to detect and reduce the risk of fraud, these measures need continual improvement and may not be effective against new and continually evolving forms of fraud or in connection with new product offerings. If we are unable to effectively combat the use of fraudulent credit cards on our websites or if we otherwise experience increased levels of fraud or disputed credit card payments, our business will suffer.

We are subject to payments-related risks.

We accept payments using a variety of methods, including credit cards, debit cards and gift certificates. As we offer new payment options to customers, we may be subject to additional regulations, compliance requirements and fraud. For certain payment methods, including credit and debit cards, we pay interchange and other fees, which may increase over time and raise our operating costs and lower profitability. In addition, our credit card and other payment processors could impose receivable holdback or reserve requirements in the future. We rely on third parties to provide payment processing services, including the processing of credit cards and debit cards, and it could disrupt our business if these companies become unwilling or unable to provide these services to us. We are also subject to payment card association operating rules, certification requirements and rules governing electronic funds transfers, which could change or be reinterpreted to make it difficult or impossible for us to comply. If we fail to comply with these rules or requirements, we may be subject to fines and higher transaction fees and lose our ability to accept credit and

debit card payments from customers or facilitate other types of online payments, and our business and operating results could be adversely affected.

We are also subject to or voluntarily comply with a number of other laws and regulations relating to money laundering, international money transfers, privacy and information security and electronic fund transfers. If we were found to be in violation of applicable laws or regulations, we could be subject to civil and criminal penalties or forced to cease our payment processing service business. In addition, events affecting our third-party payment processors, including cyber-attacks, Internet or other infrastructure or communications impairment or other events that could interrupt the normal operation of our payment processors or result in unauthorized access to customer information, could have a material adverse effect on our business.

Federal laws and regulations, such as the Bank Secrecy Act and the USA PATRIOT Act and similar foreign laws, could be expanded to include Groupons.

Various federal laws, such as the Bank Secrecy Act and the USA PATRIOT Act and foreign laws and regulations, such as the European Directive on the prevention of the use of the financial system for the purpose of money laundering and terrorist financing, impose certain anti-money laundering requirements on companies that are financial institutions or that provide financial products and services. For these purposes, financial institutions are broadly defined to include money services businesses such as money transmitters, check cashers and sellers or issuers of stored value cards. Examples of anti-money laundering requirements imposed on financial institutions include subscriber identification and verification programs, record retention policies and procedures and transaction reporting. We do not believe that we are a financial institution subject to these laws and regulations based, in part, upon the characteristics of Groupons and our role with respect to the distribution of Groupons to customers. For example, the Financial Crimes Enforcement Network ("FinCEN"), a division of the U.S. Treasury Department tasked with implementing the requirements of the Bank Secrecy Act (the "BSA"), has adopted regulations expanding the scope of the BSA and requirements for parties involved in stored value or prepaid access cards, including a proposed expansion of financial institutions to include sellers or issuers of prepaid access cards. While we believe Groupons are not subject to these regulations, it is possible that FinCEN or a court of law could consider Groupons a financial product and that we could be a financial institution. In the event that we become subject to the requirements of the Bank Secrecy Act or any other anti-money laundering law or regulation imposing obligations on us as a money services business, our regulatory compliance costs to meet these obligations would likely increase which could adversely impact our operating results.

State and foreign laws regulating money transmission could be expanded to include Groupons.

Many states and certain foreign jurisdictions impose license and registration obligations on those companies engaged in the business of money transmission, with varying definitions of what constitutes money transmission. We do not currently believe we are a money transmitter given our role and the product terms of Groupons. However, a successful challenge to our position or expansion of state or foreign laws could subject us to increased compliance costs and delay our ability to offer Groupons in certain jurisdictions pending receipt of any necessary licenses or registrations.

Our ability to raise capital in the future may be limited, which could prevent us from growing, and our existing credit agreement could restrict our business activities.

We may in the future be required to raise capital through public or private financing or other arrangements. Such financing may not be available on acceptable terms, or at all, and our failure to raise capital when needed could harm our business. In addition, we are party to a \$250.0 million amended and restated credit agreement with JPMorgan Chase Bank, N.A., as Administrative Agent, dated as of June 29, 2016, as amended (the "Credit Agreement"). Our Credit Agreement contains financial and other covenants that may restrict our business activities or our ability to execute our strategic objectives, and our failure to comply with these covenants could result in a default under our Credit Agreement. Furthermore, additional equity financing may dilute the interests of our common stockholders, and debt financing, if available, may involve restrictive covenants that could further restrict our business activities or our ability to execute our strategic objectives and could reduce our profitability. If we cannot raise or borrow funds on acceptable terms, we may not be able to grow our business or respond to competitive pressures.

We may not have the ability to use cash to settle the principal amount of our 3.25% convertible notes due 2022 (the "Notes") upon conversion or to repurchase the Notes upon a fundamental change, which could result in dilution and could adversely affect our financial condition.

The Notes are convertible any time prior to their maturity on April 1, 2022 into cash, stock or a combination of cash and stock at an initial conversion rate set forth in the indenture governing the Notes (the "Indenture"). Notes that are converted in connection with a make-whole fundamental change (as defined in the Indenture) may be entitled to an increase in the conversion rate for such Notes. Upon a conversion event, if we do not have adequate cash available or cannot obtain additional financing,

or our use of cash is restricted by applicable law, regulations or agreements governing our current or future indebtedness, we may not be able to use cash to settle the principal amount of the Notes upon conversion. If we settle any portion of the principal amount of the Notes upon conversion in stock, it will result in immediate dilution to the ownership interests of existing stockholders and such dilution could be material.

In addition, holders of the Notes have the right to require us to repurchase their Notes upon the occurrence of a fundamental change (as defined in the Indenture) at a repurchase price equal to 100% of the principal amount of the Notes to be repurchased, plus accrued and unpaid interest, if any. If we do not have adequate cash available or cannot obtain additional financing, or our use of cash is restricted by applicable law, regulations or agreements governing our current or future indebtedness, we may not be able to repurchase the Notes when required under the Indenture, which would constitute an event of default under the Indenture. An event of default under the Indenture could also lead to a default under other agreements governing our current and future indebtedness, and if the repayment of such other indebtedness were accelerated, we may not have sufficient funds to repay the indebtedness and repurchase the Notes or make cash payments upon conversion of the Notes.

The terms of the Notes could delay or prevent an attempt to take over our Company.

The terms of the Notes require us to repurchase the Notes in the event of a fundamental change. A takeover of our Company would constitute a fundamental change. This could have the effect of delaying or preventing a takeover of our Company that may otherwise be beneficial to our stockholders.

Risks Related to Ownership of Our Common Stock

The trading price of our common stock is highly volatile.

Our common stock began trading on the NASDAQ Global Select Market on November 4, 2011 and since that date has fluctuated significantly. We expect that the trading price of our stock will continue to be volatile due to variations in our operating results and also may change in response to other factors, including factors specific to technology and Internet commerce companies, many of which are beyond our control. Among the factors that could affect our stock price are:

- our financial results;
- any financial projections that we provide to the public, any changes in these projections or our failure for any reason to meet these projections or projections made by research analysts;
- the number of shares of our common stock that are available for sale;
- the relative success of competitive products or services;
- the public's response to press releases or other public announcements by us or others, including our filings with the SEC and announcements relating to litigation;
- speculation about our business in the press or the investment community;
- future sales of our common stock by our significant stockholders, officers and directors;
- announcements about our share repurchase program and purchases under the program;
- changes in our capital structure, such as future issuances of debt or equity securities;
- our entry into new markets or exits from existing markets;
- regulatory developments in the United States or foreign countries;
- strategic acquisitions, joint ventures or restructurings announced or consummated by us or our competitors;
- strategic dispositions of businesses or other assets announced or consummated by us; and
- changes in accounting principles.

We expect the stock price volatility to continue for the foreseeable future as a result of these and other factors.

Purchases of shares of our common stock pursuant to our share repurchase program may affect the value of our common stock, and there can be no assurance that our share repurchase program will enhance shareholder value.

Pursuant to our publicly announced share repurchase program, we are authorized to repurchase up to \$700.0 million of our outstanding common stock through April 2018. The Company has approximately \$195.0 million remaining under this authorization as of December 31, 2016. The timing and amount of any share repurchases will be determined based on market conditions, share price and other factors. This activity could increase (or reduce the size of any decrease in) the market price of our common stock at that time. Additionally, repurchases under our share repurchase program have and will continue to diminish our cash reserves, which could impact our ability to pursue possible strategic opportunities and acquisitions and could result in lower overall returns on our cash balances. There can be no assurance that any share repurchases will enhance shareholder value because the market price of our common stock has declined, and may continue to decline. Although our share repurchase program is intended to enhance long-term stockholder value, short-term stock price fluctuations could reduce the program's effectiveness.

If securities or industry analysts do not publish research or reports about our business, or publish inaccurate or unfavorable research reports about our business, our share price and trading volume could decline.

The trading market for our common stock depends, in part, on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us should downgrade our shares or change their opinion of our shares, industry sector or products, our share price would likely decline. If one or more of these analysts ceases coverage of our company or fails to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

The concentration of our common stock ownership with our founders and their affiliates may limit stockholders' ability to influence corporate matters.

On October 31, 2016, each share of our Class A common stock and Class B common stock automatically converted (the "Conversion") into a single class of common stock. As a result of the Conversion, each holder of our common stock is entitled to one vote per share on any matter that is submitted to a vote of stockholders. Although the voting power of our founders was more concentrated prior to the Conversion, Eric Lefkofsky and Bradley Keywell and their affiliates continue to own approximately 23.3% of our common stock as of February 13, 2017. They, therefore, may have significant influence over matters requiring stockholder approval, including the election of directors and significant corporate transactions, such as a merger or other sale of our company or its assets. This concentrated ownership could limit stockholders' ability to influence corporate matters and, as a result, we may take actions that our stockholders do not view as beneficial. As a result, the market price of our common stock could be adversely affected.

We do not intend to pay dividends for the foreseeable future.

We intend to retain all of our earnings for the foreseeable future to finance the operation and expansion of our business and do not anticipate paying cash dividends. As a result, stockholders can expect to receive a return on their investment in our common stock only if the market price of the stock increases.

Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable.

Provisions in our certificate of incorporation and bylaws may have the effect of delaying or preventing a change of control or changes in our management. These provisions include the following:

- Our Board of Directors has the right to elect directors to fill a vacancy created by the expansion of the Board of Directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our Board of Directors.
- Special meetings of our stockholders may be called only by our Chairman of the Board, our Chief Executive Officer, our Board of Directors or holders of not less than the majority of our issued and outstanding common stock. This limits the ability of minority stockholders to take certain actions without an annual meeting of stockholders.
- Our stockholders may not act by written consent unless the action to be effected and the taking of such action by written consent is approved in advance by our Board of Directors. As a result, a holder, or holders, controlling a

majority of our common stock would generally not be able to take certain actions without holding a stockholders' meeting.

- Our certificate of incorporation prohibits cumulative voting in the election of directors. This limits the ability of minority stockholders to elect director candidates.
- Stockholders must provide timely notice to nominate individuals for election to the Board of Directors or to propose matters that can be acted upon at an annual meeting of stockholders. These provisions may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of our company.
- Our Board of Directors may issue, without stockholder approval, shares of undesignated preferred stock. The ability to authorize undesignated preferred stock makes it possible for our Board of Directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us.

The convertible note hedge and warrant transactions may affect the value of our common stock.

On May 9, 2016, we purchased convertible note hedges from certain bank counterparties. The convertible note hedges are intended to reduce the potential economic dilution upon conversion of the Notes. On May 9, 2016, we also sold warrants to certain bank counterparties. The warrant transactions would separately have a dilutive effect to the extent that the market price per share of our common stock exceeds the applicable strike price of the warrants.

The bank counterparties or their respective affiliates may modify their initial hedge positions by entering into or unwinding various derivatives contracts with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions prior to the maturity of the Notes (and are likely to do so during any observation period related to a conversion of Notes or following any repurchase of Notes by us on any fundamental change repurchase date or otherwise). This activity could cause or avoid a significant change in the market price of our common stock.

In addition, in some circumstances, such as an early termination of the convertible note hedge and warrant transactions, the bank counterparties or their respective affiliates may unwind their hedge positions with respect to our common stock, which could adversely affect the value of our common stock.

ITEM 1B: UNRESOLVED STAFF COMMENTS

None.

ITEM 2: PROPERTIES

As of December 31, 2016, the Company had leases for approximately 1.6 million square feet of space. Our corporate headquarters and principal executive offices are located in Chicago, Illinois. Other properties are located throughout the world and largely represent local operating facilities. We believe that our properties are in good condition and meet the needs of our business, and that suitable additional or alternative space will be available as needed to accommodate our business operations and future growth.

<u>Description of Use</u>	<u>Segment</u>	<u>Square Feet</u>	<u>Various lease expirations through</u>
Corporate offices	North America	706,000	January 2026
Corporate offices	EMEA	341,000	June 2024
Corporate offices	Rest of World	211,000	May 2025
Fulfillment and data centers	North America	337,000	August 2020
Fulfillment and data centers	EMEA	17,000	March 2019
Fulfillment and data centers	Rest of World	24,000	July 2019

ITEM 3: LEGAL PROCEEDINGS

For a description of our material pending legal proceedings, please see Note 10, *Commitments and Contingencies*, to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K.

ITEM 4: MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5: MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our Class A common stock or common stock, as applicable, has been listed on the NASDAQ Global Select Market under the symbol "GRPN" since November 4, 2011. On October 31, 2016, each share of our Class A common stock and Class B common stock automatically converted (the "Conversion") into a single class of common stock. The following table sets forth the high and low intraday sales price for our common stock (and Class A common stock prior to the Conversion) as reported by the NASDAQ Global Select Market for each of the quarterly periods listed.

2015	High	Low
First Quarter	\$ 8.37	\$ 6.75
Second Quarter	\$ 7.54	\$ 5.01
Third Quarter	\$ 5.32	\$ 3.21
Fourth Quarter	\$ 4.05	\$ 2.54

2016	High	Low
First Quarter	\$ 4.86	\$ 2.22
Second Quarter	\$ 4.61	\$ 2.98
Third Quarter	\$ 5.89	\$ 3.25
Fourth Quarter	\$ 5.32	\$ 3.32

Holders

As of February 13, 2017, there were 176 holders of record of our common stock. As a result of the Conversion, each holder of our common stock is entitled to one vote per share on any matter that is submitted to a vote of stockholders.

Dividend Policy

We currently do not anticipate paying dividends on our common stock in the foreseeable future. Any future determination to declare cash dividends will be made at the discretion of our Board of Directors, subject to applicable laws, and will depend on our financial condition, results of operations, capital requirements, general business conditions and other factors that our Board of Directors may deem relevant.

Equity Compensation Plan Information

Information about the securities authorized for issuance under our compensation plans is incorporated by reference from the Company's Proxy Statement for the 2017 Annual Meeting of Stockholders.

Recent Sales of Unregistered Securities

During the year ended December 31, 2016, we did not issue any unregistered equity securities.

Issuer Purchases of Equity Securities

The Board has authorized the Company to repurchase up to \$700.0 million of its common stock through April 2018 under its current share repurchase program. The timing and amount of any share repurchases will be determined based on market conditions, share price and other factors, and the program may be discontinued or suspended at any time. We will fund the repurchases through cash on hand, future cash flows and borrowings under our credit facility. Repurchases will be made in compliance with SEC rules and other legal requirements and may be made in part under a Rule 10b5-1 plan, which permits stock repurchases when the Company might otherwise be precluded from doing so.

During the three months ended December 31, 2016, we purchased 12,397,795 shares of our common stock (and Class A common stock prior to the Conversion) for an aggregate purchase price of \$49.9 million (including fees and commissions) under the share repurchase program. A summary of our common stock repurchases during the three months ended December 31, 2016 under the repurchase program is set forth in the following table:

Date	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under Program
October 1-31, 2016	1,986,963	\$ 4.88	1,986,963	\$ 235,036,117
November 1-30, 2016	5,185,153	4.01	5,185,153	\$ 214,334,299
December 1-31, 2016	5,225,679	3.72	5,225,679	\$ 194,964,087
Total	12,397,795	\$ 4.03	12,397,795	\$ 194,964,087

From the inception of our share repurchase programs in August 2013 through December 31, 2016, we have repurchased 171,695,908 shares of our common stock (and Class A common stock prior to the Conversion) for an aggregate purchase price of \$807.4 million (including fees and commissions).

The following table provides information about purchases of shares of our common stock during the three months ended December 31, 2016 related to shares withheld upon vesting of restricted stock units for minimum tax withholding obligations:

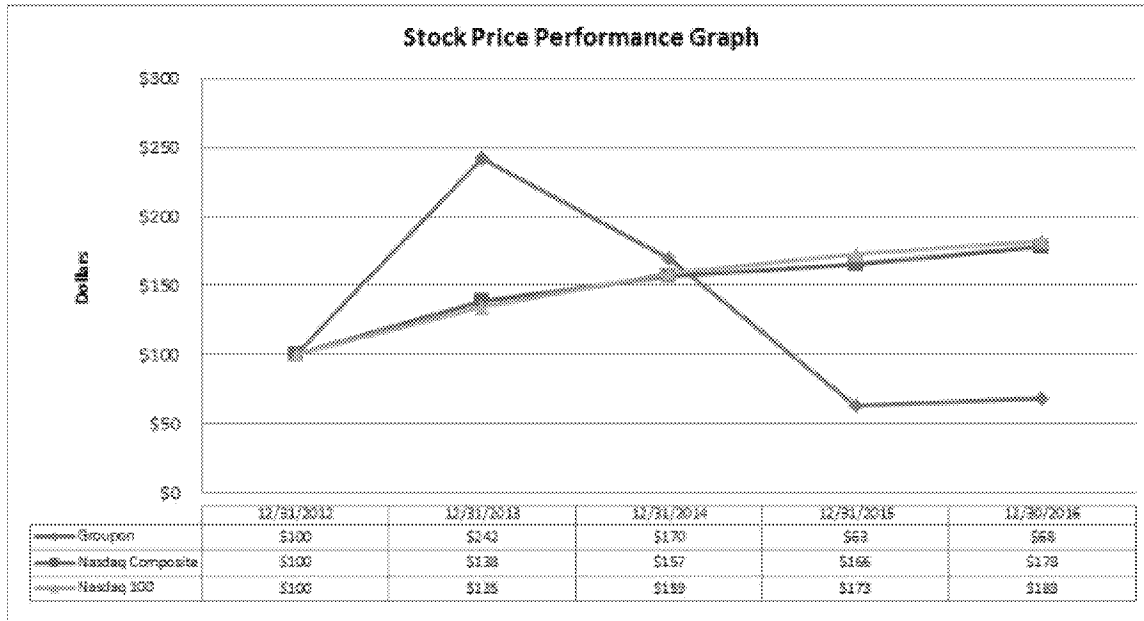
Date	Total Number of Shares Purchased ⁽¹⁾	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under Program
October 1-31, 2016	685,116	\$ 5.06	—	—
November 1-30, 2016	360,320	4.01	—	—
December 1-31, 2016	704,219	3.43	—	—
Total	1,749,655	\$ 4.19	—	—

(1) Total number of shares delivered to us by employees to satisfy the mandatory tax withholding requirement upon vesting of stock-based compensation awards.

Stock Performance Graph

This performance graph shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the Exchange Act), or incorporated by reference into any filing of Groupon, Inc. under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing. Our stock price performance shown in the graph below is not indicative of our future stock price performance.

The graph set forth below compares the cumulative total return on our common stock (and Class A common stock prior to the Conversion) with the cumulative total return of the Nasdaq Composite Index and the Nasdaq 100 Index, resulting from an initial investment of \$100 in each and assuming the reinvestment of any dividends, based on closing prices on the last trading day of each year end period for 2012, 2013, 2014, 2015 and 2016.



Source: Yahoo! Finance

ITEM 6: SELECTED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with our consolidated financial statements and the accompanying notes thereto in Item 8 of this Annual Report on Form 10-K, and the information contained in Item 7 *Management's Discussion and Analysis of Financial Condition and Results of Operations* of this Annual Report on Form 10-K. Historical results are not necessarily indicative of future results.

	Year Ended December 31,				
	2016	2015	2014	2013	2012
(in thousands, except share and per share amounts)					
Consolidated Statements of Operations Data ⁽¹⁾:					
Revenue:					
Third-party and other	\$ 1,303,546	\$ 1,372,533	\$ 1,501,011	\$ 1,654,654	\$ 1,879,729
Direct	1,839,808	1,746,983	1,541,112	919,001	454,743
Total revenue	3,143,354	3,119,516	3,042,123	2,573,655	2,334,472
Cost of revenue:					
Third-party and other	171,728	188,932	203,058	232,062	297,739
Direct	1,614,723	1,545,519	1,373,756	840,060	421,201
Total cost of revenue	1,786,451	1,734,451	1,576,814	1,072,122	718,940
Gross profit	1,356,903	1,385,065	1,465,309	1,501,533	1,615,532
Operating expenses:					
Marketing	362,951	254,335	241,954	214,824	336,854
Selling, general and administrative	1,066,168	1,192,792	1,191,385	1,210,966	1,179,080
Restructuring charges	43,608	29,568	—	—	—
Gains on business dispositions	(11,711)	(13,710)	—	—	—
Acquisition-related expense (benefit), net	5,650	1,857	1,269	(11)	897
Total operating expenses	1,466,666	1,464,842	1,434,608	1,425,779	1,516,831
Income (loss) from operations	(109,763)	(79,777)	30,701	75,754	98,701
Other income (expense), net	(76,107)	(28,539)	(33,450)	(94,663)	(3,759)
Income (loss) from continuing operations before provision (benefit) for income taxes	(185,870)	(108,316)	(2,749)	(18,909)	94,942
Provision (benefit) for income taxes	(2,547)	(19,145)	15,724	70,037	145,973
Income (loss) from continuing operations	(183,323)	(89,171)	(18,473)	(88,946)	(51,031)
Income (loss) from discontinued operations, net of tax	—	122,850	(45,446)	—	—
Net income (loss)	(183,323)	33,679	(63,919)	(88,946)	(51,031)
Net (income) loss attributable to noncontrolling interests	(11,264)	(13,011)	(9,171)	(6,447)	(3,742)
Net income (loss) attributable to Groupon, Inc.	(194,587)	20,668	(73,090)	(95,393)	(54,773)
Adjustment of redeemable noncontrolling interests to redemption value	—	—	—	—	(12,604)
Net income (loss) attributable to common stockholders	\$ (194,587)	\$ 20,668	\$ (73,090)	\$ (95,393)	\$ (67,377)
Basic and diluted net income (loss) per share ⁽²⁾:					
Continuing operations	\$ (0.34)	\$ (0.16)	\$ (0.04)	\$ (0.14)	\$ (0.10)
Discontinued operations	—	0.19	(0.07)	—	—
Basic and diluted net income (loss) per share	\$ (0.34)	\$ 0.03	\$ (0.11)	\$ (0.14)	\$ (0.10)
Weighted average number of shares outstanding ⁽²⁾					
Basic	576,354,258	650,106,225	674,832,393	663,910,194	650,214,119
Diluted	576,354,258	650,106,225	674,832,393	663,910,194	650,214,119

(1) We disposed of our Korean subsidiary Ticket Monster, Inc. in May 2015. The financial results of Ticket Monster, including the gain on disposition and related tax effects, are presented as discontinued operations for the years ended December 31, 2015 and 2014. See Note 3, *Discontinued Operations and Other Dispositions*, for additional information.

(2) The structure of the Company's common stock changed during the year ended December 31, 2016. Refer to Note 11, *Stockholders' Equity*, and Note 17, *Income (Loss) per Share*, for additional information.

	As of December 31,				
	2016	2015	2014	2013	2012
	(in thousands)				
Consolidated Balance Sheet Data:					
Cash and cash equivalents	\$ 891,846	\$ 853,362	\$ 1,016,634	\$ 1,240,472	\$ 1,209,289
Working capital (deficit)	(121,115)	(128,283)	91,460	394,340	341,834
Total assets	1,761,377	1,796,264	2,227,597	2,042,010	2,031,474
Total long-term liabilities	283,264	122,152	169,055	142,550	120,932
Total Groupon, Inc. Stockholders' Equity	264,420	469,398	762,826	713,651	744,040

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read together with our consolidated financial statements and related notes included under Item 8 of this Annual Report on Form 10-K. This discussion contains forward-looking statements about our business and operations. Our actual results may differ materially from those we currently anticipate as a result of many factors, including those we describe under "Risk Factors" and elsewhere in this Annual Report.

Overview

Groupon operates primarily online local commerce marketplaces throughout the world that connect merchants to consumers by offering goods and services, generally at a discount. Consumers access those marketplaces through our websites, primarily localized groupon.com sites in many countries, and our mobile applications. Traditionally, local merchants have tried to reach consumers and generate sales through a variety of methods, including online advertising, paid telephone directories, direct mail, newspaper, radio, television and other promotions. By bringing the brick and mortar world of local commerce onto the Internet, Groupon is helping local merchants to attract customers and sell goods and services. We provide consumers with savings and help them discover what to do, eat, see and buy and where to travel.

Our operations are organized into three segments: North America, EMEA, which is comprised of Europe, Middle East and Africa, and the remainder of our international operations ("Rest of World"). See Note 18, *Segment Information*, for further information. For the year ended December 31, 2016, we derived 68.5% of our revenue from our North America segment, 26.3% of our revenue from our EMEA segment and 5.2% of our revenue from our Rest of World segment.

We offer goods and services through our online local commerce marketplaces in three primary categories: Local, Goods and Travel. Collectively, Local and Travel comprise our "Services" offerings and Goods reflects our product offerings. In our Goods category, we are generally the merchant of record, particularly for product offerings in North America and in EMEA. Our revenue from transactions in which we act as a third-party marketing agent is the purchase price paid by the customer, generally for a Groupon voucher (a "Groupon"), less an agreed upon portion of the purchase price paid to the merchant. Our direct revenue from transactions in which we sell merchandise inventory in our Goods category as the merchant of record is the purchase price paid by the customer. We generated revenue of \$3,143.4 million during the year ended December 31, 2016, as compared to \$3,119.5 million during the year ended December 31, 2015.

In September 2015, we commenced a restructuring plan relating primarily to workforce reductions in our international operations. We have also undertaken workforce reductions in our North America segment. See Note 13, *Restructuring*, for additional information. We continue to explore further restructuring actions in connection with our efforts to optimize our cost structure, which are expected to be substantially completed by June 2017.

In November 2015, we announced a number of strategic changes to our business that impacted our financial performance during 2016. First, we significantly increased our marketing expenses, particularly in North America, in connection with our efforts to accelerate customer growth. Those increased marketing expenditures increased our operating losses and reduced our Adjusted EBITDA (as defined below) for the year ended December 31, 2016. Second, we took significant actions to streamline and simplify our global business. Those actions included significant headcount reductions in connection with our restructuring program and increased centralization of various functions, such as customer service, in regional shared service centers. We also ceased operations in five countries during 2016 as part of our restructuring program and sold our operations in three other countries. These actions significantly reduced our selling, general, and administrative expenses for the year ended December 31, 2016. Third, we have focused on improving the margins in our Goods category in North America by de-emphasizing lower margin product offerings and reducing our per unit shipping and fulfillment costs. This initiative resulted in a gross margin improvement on Goods direct revenue transactions in North America from 10.2% in 2015 to 11.8% in 2016. While our margins improved, we believe that our de-emphasis of lower margin product offerings adversely impacted North America direct revenue growth, which was 3.2% in the current year. While we continue to seek opportunities to improve margins in our Goods category, our primary focus in 2017 will be to increase overall gross profit, regardless of whether such increase is achieved through revenue growth or margin improvements.

In October 2016, we completed a strategic review of our remaining international markets in connection with our efforts to optimize our global footprint and focus on the markets that we believe to have the greatest potential to benefit our long-term financial performance. Based on that review, we have decided to focus our business on 15 core countries, which are primarily based in North America and EMEA, and to pursue strategic alternatives for the remaining 11 countries, which are primarily based in Asia and Latin America. A business disposition that represents a strategic shift and has (or will have) a major effect on an entity's operations and financial results is reported as a discontinued operation. We have determined that the decision reached by our

management and Board of Directors to exit those 11 non-core countries, which comprise a substantial majority of our operations outside of North America and EMEA, represents a strategic shift in our business. Based on our review of quantitative and qualitative factors, we also believe that the disposition of the businesses in those 11 countries will likely have a major effect on our operations and financial results. As such, we currently anticipate that when we have either disposed of our businesses in those 11 countries or have met the criteria for held-for-sale classification, their financial results, including any gains or losses on disposition, will be presented as discontinued operations in our consolidated statements of operations. We sold our business in one of those countries and ceased operations in another during the fourth quarter of 2016, but those two countries did not have a major impact on our operations and financial results. However, we currently anticipate that the remaining nine dispositions will be complete or will have met the criteria for held-for-sale classification by March 31, 2017, which would be expected to result in discontinued operations presentation at that time. Additionally, as a result of those anticipated dispositions, which represent a substantial majority of our international operations outside of EMEA, and the resulting changes to our internal reporting and leadership structure, we currently expect to combine our EMEA and Rest of World segments into a single International segment in 2017.

On October 31, 2016, each share of our Class A common stock and Class B common stock converted automatically into a single class of common stock (the "Conversion") pursuant to the terms of our Sixth Amended and Restated Certificate of Incorporation, as amended. Prior to the Conversion, holders of our Class A common stock were entitled to one vote per share and holders of our Class B common stock were entitled to 150 votes per share. Prior to the Conversion, we had 2,399,976 shares of Class B common stock issued and outstanding, all of which were held by our three founders. Following the Conversion, each share of common stock is entitled to one vote per share and otherwise has the same designations, rights, powers and preferences as a share of the Class A common stock prior to the Conversion. In addition, holders of the common stock now vote as a single class of stock on any matter that is submitted to a vote of stockholders.

On October 31, 2016, we acquired all of the outstanding shares of LivingSocial, Inc. ("LivingSocial"). No consideration was paid in connection with this acquisition. Living Social is an online local commerce company based in the United States, and its operations are reported within our North America segment for the period from its acquisition date through December 31, 2016.

How We Measure Our Business

We measure our business with several financial and operating metrics. We use these metrics to assess the progress of our business, make decisions on where to allocate capital, time and technology investments and assess the long-term performance of our marketplaces. Certain of the financial metrics are reported in accordance with U.S. GAAP and certain of these metrics are considered non-GAAP financial measures. As our business evolves, we may make changes to our key financial and operating metrics used to measure our business in future periods. For further information and a reconciliation to the most applicable financial measure under U.S. GAAP, refer to our discussion under Non-GAAP Financial Measures in the "Results of Operations" section.

Financial Metrics

- *Gross billings.* This metric represents the total dollar value of customer purchases of goods and services. For third-party revenue transactions, gross billings differs from third-party revenue reported in our consolidated statements of operations, which is presented net of the merchant's share of the transaction price. For direct revenue transactions, gross billings are equivalent to direct revenue reported in our consolidated statements of operations. We consider this metric to be an important indicator of our growth and business performance as it measures the dollar volume of transactions generated through our marketplaces. Tracking gross billings on third-party revenue transactions also allows us to monitor the percentage of gross billings that we are able to retain after payments to merchants.
- *Revenue.* Third-party revenue, which is earned from transactions in which we act as a marketing agent, is reported on a net basis as the purchase price received from the customer less an agreed upon portion of the purchase price paid to the featured merchant. Direct revenue, which is earned from sales of merchandise inventory directly to customers through our online marketplaces, is reported on a gross basis as the purchase price received from the customer.
- *Gross profit.* Gross profit reflects the net margin earned after deducting our cost of revenue from our revenue. Due to the lack of comparability between third-party revenue, which is presented net of the merchant's share of the transaction price, and direct revenue, which is reported on a gross basis, we believe that gross profit is an important measure for evaluating our performance.

- *Adjusted EBITDA*. Adjusted EBITDA is a non-GAAP performance measure that we define as net income (loss) from continuing operations excluding income taxes, interest and other non-operating items, depreciation and amortization, stock-based compensation, acquisition-related expense (benefit), net and other special charges and credits, including items that are unusual in nature or infrequently occurring. For further information and a reconciliation to the most applicable financial measure under U.S. GAAP, refer to our discussion under Non-GAAP Financial Measures in the *Results of Operations* section.
- *Free cash flow*. Free cash flow is a non-GAAP financial measure that comprises net cash provided by (used in) operating activities from continuing operations less purchases of property and equipment and capitalized software from continuing operations. For further information and a reconciliation to the most applicable financial measure under U.S. GAAP, refer to our discussion under Non-GAAP Financial Measures in the *Results of Operations* section.

The following table presents the above financial metrics for the years ended December 31, 2016, 2015 and 2014 (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Gross billings	\$ 6,096,504	\$ 6,255,540	\$ 6,237,832
Revenue	3,143,354	3,119,516	3,042,123
Gross profit	1,356,903	1,385,065	1,465,309
Adjusted EBITDA	178,090	256,832	262,301
Free cash flow ⁽¹⁾	48,212	215,759	184,917

The most comparable U.S. GAAP performance measure for Adjusted EBITDA is "Income (loss) from continuing operations" and the most comparable U.S. GAAP liquidity measure for Free Cash Flow is "Net cash provided by (used in) operating activities from continuing operations." For further information and a reconciliation to the most applicable measure under U.S. GAAP, refer to our discussion under Non-GAAP Financial Measures in the *Results of Operations* section. The following table provides income (loss) from continuing operations and net cash provided by (used) in operating activities from continuing operations for the years ended December 31, 2016, 2015 and 2014 (in thousands):

	Year Ended December 31,		
	2016	2015 ⁽¹⁾	2014 ⁽¹⁾
Income (loss) from continuing operations	\$ (183,323)	\$ (89,171)	\$ (18,473)
Net cash provided by (used in) operating activities from continuing operations	117,105	299,747	268,477

- (1) We adopted the guidance in ASU 2016-09 on January 1, 2016. ASU 2016-09 requires that all income tax-related cash flows resulting from share-based payments be reported as operating activities in the statement of cash flows. Previously, income tax benefits at settlement of an award were reported as a reduction to operating cash flows and an increase to financing cash flows to the extent that those benefits exceeded the income tax benefits reported in earnings during the award's vesting period. We elected to apply that change in cash flow classification on a retrospective basis, which has resulted in increases to net cash provided by operating activities, net cash used in financing activities and free cash flow of \$7.6 million and \$16.0 million for the years ended December 31, 2015 and 2014, respectively.

Operating Metrics

- *Active customers.* We define active customers as unique user accounts that have made a purchase through one of our online marketplaces during the trailing twelve months. We consider this metric to be an important indicator of our business performance as it helps us to understand how the number of customers actively purchasing our offerings is trending. Some customers could establish and make purchases from more than one account, so it is possible that our active customer metric may count certain customers more than once in a given period. For entities that we have acquired in a business combination, active customers include unique user accounts that have made a purchase through the acquired entity's website during the trailing twelve months, which includes customers who have made purchases prior to our acquisition of the entity.
- *Gross billings per average active customer.* This metric represents the trailing twelve months gross billings generated per average active customer. This metric is calculated as the total gross billings generated in the trailing twelve months, divided by the average number of active customers in such time period. Although we believe total gross billings, not gross billings per average active customer, is a better indication of the overall growth of our marketplaces over time, gross billings per average active customer provides us with information about average annual customer spend.
- *Units.* This metric represents the number of purchases made through our online marketplaces, before refunds and cancellations. We consider unit growth to be an important indicator of the total volume of business conducted through our marketplaces.

Our active customers and gross billings per average active customer for the trailing twelve months ("TTM") ended December 31, 2016, 2015 and 2014 were as follows:

	Trailing twelve months ended December 31,		
	2016 ⁽¹⁾	2015	2014
TTM Active customers (in thousands)	52,749	48,889	47,426
TTM Gross billings per average active customer	\$ 119.97	\$ 129.98	\$ 136.95

(1) TTM Active customers for the year ended December 31, 2016 includes approximately 1.0 million incremental active customers from the acquisition of LivingSocial, Inc.

Our units for the years ended December 31, 2016, 2015 and 2014 were as follows:

	Year Ended December 31,		
	2016	2015	2014
Units (in thousands)	214,285	220,824	214,301

Factors Affecting Our Performance

Deal sourcing and quality. We consider our merchant relationships to be a vital part of our business model. We depend on our ability to attract and retain merchants that are prepared to offer products or services on compelling terms, particularly as we attempt to expand our product and service offerings in order to create more complete online marketplaces for local commerce. Our online marketplaces, which we sometimes refer to as "pull" marketplaces, enable customers to search and browse for deal offerings on our websites and mobile applications. In North America and many of our foreign markets, merchants often have a continuous presence on our websites and mobile applications by offering vouchers on an ongoing basis for an extended period of time. Currently, a substantial majority of our merchants in North America elect to offer deals in this manner, and we expect that trend to continue. However, merchants have the ability to withdraw their deal offerings, and we generally do not have noncancelable long-term arrangements to guarantee availability of deals. In order to attract merchants that may not have run deals on our platform or would have run deals on a competing platform, we have been willing to accept lower deal margins across all three of our segments and we expect that trend to continue. If new merchants do not find our marketing and promotional services effective, or if our existing merchants do not believe that utilizing our services provides them with a long-term increase in customers, revenue or profit, they may stop making offers through our marketplaces or they may only continue offering deals if we accept lower margins.

International operations. Operating a global business requires management attention and resources and requires us to localize our services to conform to a wide variety of local cultures, business practices, laws and policies. We have reduced our global footprint from 47 countries as of December 31, 2014 to 24 countries as of December 31, 2016, and we are currently exploring strategic alternatives in order to focus our business on 15 core countries by early 2017. Notwithstanding our reduced global footprint, different commercial and regulatory environments in other countries continue to make it more difficult for us to successfully operate our business. In addition, many of the automation tools and technology enhancements that we have implemented in our North America segment are not yet fully implemented in our international markets.

Our international operations have decreased as a percentage of our total revenue. For the years ended December 31, 2016, 2015 and 2014, 26.3%, 27.8% and 31.6% of our revenue was generated from our EMEA segment, respectively, and 5.2%, 6.6% and 8.4% of our revenue was generated from our Rest of World segment, respectively. The increase in North America revenue as a percentage of total revenue in 2016 was primarily due to domestic revenue growth, the reduction in our international footprint, and the adverse impact of year-over-year changes in foreign currency exchange rates on our international revenue.

Marketing activities. We must continue to acquire and retain customers in order to increase revenue and achieve profitability. If consumers do not perceive the offerings on our marketplaces to be attractive, or if we fail to introduce new or more relevant deals, we may not be able to acquire or retain customers. In addition, as we continue to build out more complete marketplaces, our success will depend on our ability to increase consumer awareness of offerings available through those marketplaces. We significantly increased our marketing spending throughout 2016 in order to drive customer growth and we expect marketing expense as a percentage of gross billings to remain relatively consistent in 2017.

As discussed under "*Components of Results of Operations*," we consider order discounts, free shipping on qualifying merchandise sales and reducing margins on our deals to be marketing-related activities, even though these activities are not presented as marketing expenses in our consolidated statements of operations. We have increased our use of order discounts as a marketing tool in recent periods because we believe that this is an effective method of driving transaction activity through our marketplaces and acquiring new customers. Additionally, we have, and expect to continue to, reduce our deal margins when we believe that by doing so we can offer our customers a product or service from a merchant who might not have otherwise been willing to conduct business through our marketplaces. We consider such margin reductions to be a marketing-related activity because we believe that offering compelling deals from top merchants on our marketplaces is an effective method of retaining, activating and acquiring customers.

Investment in growth. We intend to continue to invest in our products and infrastructure to support our growth. We also have invested in business acquisitions to grow our merchant and customer base, expand and advance our product and service offerings and enhance our technology capabilities. We anticipate that we will make substantial investments in the foreseeable future as we continue to increase our offerings and improve the quality of active deals available through our marketplaces, broaden our customer base and develop our technology. Additionally, we believe that our efforts to automate our internal processes as well as our restructuring actions, which have allowed us to centralize many of our back office activities in lower cost shared service centers, will enable us to run our business more efficiently and improve our cost structure over time.

Competitive pressure. We face competition from a variety of sources. Some of our competitors offer deals as an add-on to their core businesses, and others have adopted a business model similar to ours. In addition to such competitors, we expect to increasingly compete against other large Internet and technology-based businesses that have launched initiatives which are directly competitive to our core business. We also expect to compete against other Internet sites that are focused on specific communities or interests and offer coupons or discount arrangements related to such communities or interests. Further, as our business continues to evolve, we anticipate facing new competition. Increased competition in the future may adversely impact our gross billings, revenue and profit margins.

Results of Operations

Gross Billings

Gross billings represents the total dollar value of customer purchases of goods and services. Gross billings is presented net of customer refunds, order discounts and sales and related taxes.

Comparison of the Years Ended December 31, 2016 and 2015 :

Gross billings for the years ended December 31, 2016 and 2015 were as follows:

	Year Ended December 31,			
	2016	2015	\$ Change	% Change
	(in thousands)			
Gross billings:				
Third-party	\$ 4,163,338	\$ 4,450,560	\$ (287,222)	(6.5)%
Direct	1,839,808	1,746,983	92,825	5.3
Other	93,358	57,997	35,361	61.0
Total gross billings	<u>\$ 6,096,504</u>	<u>\$ 6,255,540</u>	<u>\$ (159,036)</u>	<u>(2.5)</u>

The effect on our gross billings for the year ended December 31, 2016 from changes in exchange rates versus the U.S. dollar was as follows:

	Year Ended December 31, 2016		
	At Avg.	Exchange	As
	2015	Rate	
	Rates ⁽¹⁾	Effect ⁽²⁾	Reported
	(in thousands)		
Gross billings	\$ 6,172,426	\$ (75,922)	\$ 6,096,504

(1) Represents the financial statement balances that would have resulted had exchange rates in the reporting period been the same as those in effect in the prior year period.

(2) Represents the increase or decrease in the reported amount resulting from changes in exchange rates from those in effect in the prior year period.

The decrease in total gross billings for the year ended December 31, 2016 was primarily attributable to the following:

- a \$180.8 million reduction related to countries that we operated in during the prior year period and have subsequently exited as part of our restructuring plan and dispositions of our operations in India, Russia, Indonesia and Malaysia; and
- a \$75.9 million unfavorable impact from year-over-year changes in foreign currency exchange rates.

The above drivers adversely impacted gross billings per average active customer, which were \$119.97 for the year ended December 31, 2016, as compared to \$129.98 for the year ended December 31, 2015. Additionally, the total number of units sold decreased to 214.3 million units for the year ended December 31, 2016, as compared to 220.8 million units for the year ended December 31, 2015, driven by our country exits and dispositions. Order discounts increased by \$53.0 million to \$215.9 million for the year ended December 31, 2016, as compared to \$162.9 million for the year ended December 31, 2015.

The decrease in total gross billings was attributable to our international operations and was partially offset by increases in the Local and Goods categories in our North America segment.

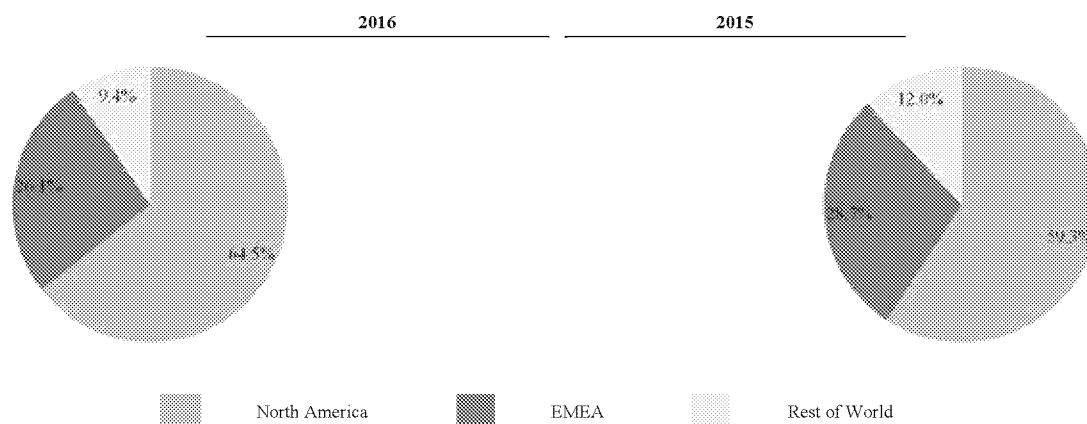
Total gross billings attributable to the 11 countries that we plan to exit by early 2017 in connection with our global footprint optimization were \$408.8 million for the year ended December 31, 2016.

Gross Billings by Segment

Gross billings by segment for the years ended December 31, 2016 and 2015 were as follows:

	Year Ended December 31,			
	2016	2015	\$ Change	% Change
(dollars in thousands)				
North America:				
Third-party and other	\$ 2,638,611	\$ 2,452,249	\$ 186,362	7.6 %
Direct	1,297,810	1,257,548	40,262	3.2
Total segment gross billings	3,936,421	3,709,797	226,624	6.1
EMEA:				
Third-party	1,073,911	1,331,984	(258,073)	(19.4)
Direct	514,527	462,370	52,157	11.3
Total segment gross billings	1,588,438	1,794,354	(205,916)	(11.5)
Rest of World:				
Third-party	544,174	724,324	(180,150)	(24.9)
Direct	27,471	27,065	406	1.5
Total segment gross billings	571,645	751,389	(179,744)	(23.9)
Total gross billings	\$ 6,096,504	\$ 6,255,540	\$ (159,036)	(2.5)

The percentages of gross billings by segment for the years ended December 31, 2016 and 2015 were as follows:



Gross billings by category and segment for the years ended December 31, 2016 and 2015 were as follows:

	North America		EMEA		Rest of World		Consolidated	
	Year Ended December 31,		Year Ended December 31,		Year Ended December 31,		Year Ended December 31,	
	2016	2015	2016	2015	2016	2015	2016	2015
(in thousands)								
Local ⁽¹⁾ :								
Third-party and other	\$ 2,203,515	\$ 2,024,698	\$ 678,529	\$ 796,136	\$ 327,542	\$ 376,540	\$ 3,209,586	\$ 3,197,374
Travel:								
Third-party	392,400	390,776	223,289	249,361	91,128	120,287	706,817	760,424
Total services	2,595,915	2,415,474	901,818	1,045,497	418,670	496,827	3,916,403	3,957,798
Goods:								
Third-party	42,696	36,775	172,093	286,487	125,504	227,497	340,293	550,759
Direct	1,297,810	1,257,548	514,527	462,370	27,471	27,065	1,839,808	1,746,983
Total	1,340,506	1,294,323	686,620	748,857	152,975	254,562	2,180,101	2,297,742
Total gross billings	\$ 3,936,421	\$ 3,709,797	\$ 1,588,438	\$ 1,794,354	\$ 571,645	\$ 751,389	\$ 6,096,504	\$ 6,255,540

(1) Includes gross billings from deals with local and national merchants, and through local events.

North America

The overall increase in North America segment gross billings reflects increases in our Local and Goods categories. Those increases were primarily attributable to:

- our significant incremental marketing spend to accelerate customer growth. North America marketing expense increased by \$102.3 million, or 63.6%, for the year ended December 31, 2016, as compared to the year ended December 31, 2015, driving a significant increase in active customers during 2016; and
- our focus on increasing the coverage of our offerings and improving the quality of offerings available through our marketplaces.

These items resulted in increases to both active customers and units sold in North America. Those increases were partially offset by increased order discounts and lower gross billings per average active customer. Order discounts increased by \$42.0 million to \$167.2 million for the year ended December 31, 2016, as compared to \$125.2 million for the year ended December 31, 2015. Our new customer additions in recent quarterly periods contributed to lower gross billings per average active customer in North America as those new customers do not yet have a full twelve months of purchasing history.

Gross billings in our North America Goods category increased by 3.6% during the year ended December 31, 2016, as compared to the year ended December 31, 2015. This represents a lower rate of growth than our Goods category has historically generated, which we believe resulted, in part, from our strategic initiative to de-emphasize lower margin product offerings in that category.

The gross billings from Living Social were \$22.7 million from its October 31, 2016 acquisition date through year-end.

EMEA

The overall decrease in EMEA segment gross billings reflects decreases across our Local, Travel and Goods categories. The decrease in EMEA gross billings was primarily attributable to the following:

- a \$118.7 million reduction related to countries that we operated in during the prior year period and have subsequently exited as part of our restructuring plan and the disposition of our operations in Russia; and
- a \$38.2 million unfavorable impact from year-over-year changes in foreign currency exchange rates.

Additionally, although EMEA active customers increased as compared to the prior year, units sold and gross billings per average active customer decreased as compared to the year ended December 31, 2015. Those decreases were driven by the countries we exited as part of our restructuring plan. The overall decrease in EMEA segment gross billings was partially offset by an increase in direct revenue transactions in our Goods category.

The British pound sterling has declined significantly against the U.S. dollar following the U.K.'s non-binding "Brexit" referendum on June 23, 2016, whereby a majority of voters supported its withdrawal from the European Union. We expect that our EMEA segment gross billings will continue to be adversely impacted during 2017 due to the increased strength of the U.S. dollar as compared to prior periods.

Rest of World

The overall decrease in Rest of World segment gross billings reflects decreases across our Local, Travel and Goods categories. The decrease in Rest of World gross billings was primarily attributable to the following:

- a \$62.1 million reduction related to countries that we operated in during the prior year period and have subsequently exited as part of our restructuring plan and dispositions of our operations in India, Indonesia and Malaysia;
- a \$36.7 million unfavorable impact from year-over-year changes in foreign currency exchange rates; and
- the substantial elimination of Goods offerings from our marketplaces in Brazil and Japan, which we eliminated in connection with our strategic initiative to de-emphasize lower margin product offerings.

Rest of World active customers, units sold and gross billings per average active customer all decreased as compared to the year ended December 31, 2015, driven by the countries we exited as part of our restructuring plan and dispositions of our operations in India, Indonesia and Malaysia.

Comparison of the Years Ended December 31, 2015 and 2014 :

Gross billings for the years ended December 31, 2015 and 2014 were as follows:

	Year Ended December 31,			
	2015	2014	\$ Change	% Change
	(in thousands)			
Gross billings:				
Third-party	\$ 4,450,560	\$ 4,670,653	\$ (220,093)	(4.7)%
Direct	1,746,983	1,541,112	205,871	13.4
Other	57,997	26,067	31,930	122.5
Total gross billings	<u>\$ 6,255,540</u>	<u>\$ 6,237,832</u>	<u>\$ 17,708</u>	0.3

The effect on our gross billings for the year ended December 31, 2015 from changes in exchange rates versus the U.S. dollar was as follows:

	Year Ended December 31, 2015		
	At Avg.	Exchange	
	2014	Rate	As
	Rates ⁽¹⁾	Effect ⁽²⁾	Reported
	(in thousands)		
Gross billings	\$ 6,711,274	\$ (455,734)	\$ 6,255,540

(1) Represents the financial statement balances that would have resulted had exchange rates in the reporting period been the same as those in effect in the prior year period.

(2) Represents the increase or decrease in the reported amount resulting from changes in exchange rates from those in effect in the prior year period.

The increase in total gross billings for the year ended December 31, 2015 was primarily due to the following:

- a \$205.9 million increase in gross billings from direct revenue transactions;
- a \$31.9 million increase in other gross billings. The increase in other gross billings was primarily driven by an increase in commission revenue earned when customers make purchases with retailers using digital coupons accessed through our websites and mobile applications; and
- increases in active customers and the volume of transactions, resulting from our global efforts to build our marketplaces and increase our offerings to customers.

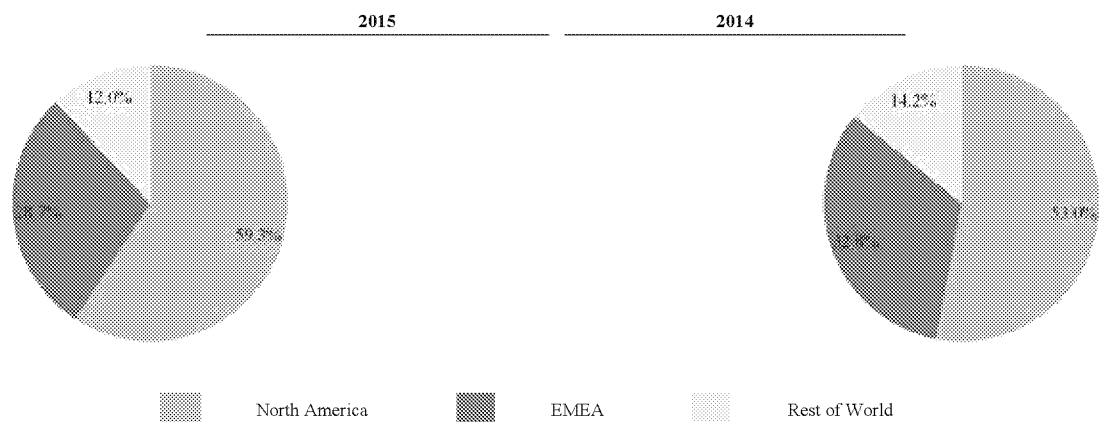
These increases were partially offset by a \$220.1 million decrease in gross billings from third-party revenue transactions and a \$455.7 million unfavorable impact from year-over-year changes in foreign currency exchange rates. Additionally, order discounts increased to \$162.9 million for the year ended December 31, 2015, as compared to \$94.4 million for the year ended December 31, 2014.

Gross Billings by Segment

Gross billings by segment for the years ended December 31, 2015 and 2014 were as follows:

	Year Ended December 31,			
	2015	2014	\$ Change	% Change
(dollars in thousands)				
North America:				
Third-party and other	\$ 2,452,249	\$ 2,228,566	\$ 223,683	10.0 %
Direct	1,257,548	1,074,913	182,635	17.0
Total segment gross billings	3,709,797	3,303,479	406,318	12.3
EMEA:				
Third-party	1,331,984	1,604,463	(272,479)	(17.0)
Direct	462,370	442,344	20,026	4.5
Total segment gross billings	1,794,354	2,046,807	(252,453)	(12.3)
Rest of World:				
Third-party	724,324	863,691	(139,367)	(16.1)
Direct	27,065	23,855	3,210	13.5
Total segment gross billings	751,389	887,546	(136,157)	(15.3)
Total gross billings	\$ 6,255,540	\$ 6,237,832	\$ 17,708	0.3

The percentages of gross billings by segment for the years ended December 31, 2015 and 2014 were as follows:



Gross billings by category and segment for the years ended December 31, 2015 and 2014 were as follows (in thousands):

	North America		EMEA		Rest of World		Consolidated	
	Year Ended December 31,		Year Ended December 31,		Year Ended December 31,		Year Ended December 31,	
	2015	2014	2015	2014	2015	2014	2015	2014
Local ⁽¹⁾ :								
Third-party and other	\$ 2,024,698	\$ 1,864,141	\$ 796,136	\$ 950,141	\$ 376,540	\$ 451,090	\$ 3,197,374	\$ 3,265,372
Travel:								
Third-party	390,776	336,898	249,361	285,978	120,287	134,626	760,424	757,502
Total services	2,415,474	2,201,039	1,045,497	1,236,119	496,827	585,716	3,957,798	4,022,874
Goods:								
Third-party	36,775	27,527	286,487	368,344	227,497	277,975	550,759	673,846
Direct	1,257,548	1,074,913	462,370	442,344	27,065	23,855	1,746,983	1,541,112
Total	1,294,323	1,102,440	748,857	810,688	254,562	301,830	2,297,742	2,214,958
Total gross billings	<u>\$ 3,709,797</u>	<u>\$ 3,303,479</u>	<u>\$ 1,794,354</u>	<u>\$ 2,046,807</u>	<u>\$ 751,389</u>	<u>\$ 887,546</u>	<u>\$ 6,255,540</u>	<u>\$ 6,237,832</u>

(1) Includes gross billings from deals with local and national merchants and through local events.

North America

The overall increase in North America segment gross billings reflects increases across our Local, Travel and Goods categories. Those increases were primarily attributable to increases in active customers, units sold and gross billings per average active customer.

We believe that increases in transaction activity by active customers who make purchases on mobile devices and in the number of deals that we offered contributed to the growth in gross billings for our North America segment. In addition, we refined our approach to targeting customers and undertook marketing initiatives to increase consumer awareness of offerings available through our marketplaces, which we believe contributed to the gross billings growth. Order discounts increased \$55.7 million to \$125.2 million for the year ended December 31, 2015, as compared to \$69.5 million for the year ended December 31, 2014.

EMEA

The overall decrease in EMEA segment gross billings reflects decreases across our Local, Travel and Goods categories. The decrease in EMEA segment gross billings resulted from a \$317.6 million unfavorable impact from year-over-year changes in foreign currency exchange rates for the year ended December 31, 2015 as compared to the year ended December 31, 2014, partially offset by increases in active customers and units sold.

Rest of World

The overall decrease in Rest of World segment gross billings reflects decreases across our Local, Travel and Goods categories. The decrease in Rest of World segment gross billings resulted from a \$132.7 million unfavorable impact on gross billings from year-over-year changes in foreign currency exchange rates for the year ended December 31, 2015 as compared to the year ended December 31, 2014.

Revenue

Third-party revenue arises from transactions in which we are acting as a marketing agent primarily by selling vouchers through our online local commerce marketplaces that can be redeemed for goods or services with third-party merchants. Our third-party revenue from those transactions is reported on a net basis as the purchase price received from the customer, less an agreed upon portion of the purchase price paid to the merchant.

Direct revenue arises from transactions in our Goods category in which we sell merchandise inventory directly to customers through our online marketplaces. The direct revenue that we earn from those transactions is reported on a gross basis as the purchase price we receive from the customer.

Other revenue primarily consists of commission revenue earned when customers make purchases with retailers using digital coupons accessed through our websites and mobile applications, payment processing revenue and advertising revenue.

Comparison of the Years Ended December 31, 2016 and 2015 :

Revenue for the years ended December 31, 2016 and 2015 was as follows:

	Year Ended December 31,			
	2016	2015	\$ Change	% Change
	(in thousands)			
Revenue:				
Third-party	\$ 1,213,711	\$ 1,314,536	\$ (100,825)	(7.7)%
Direct	1,839,808	1,746,983	92,825	5.3
Other	89,835	57,997	31,838	54.9
Total revenue	<u>\$ 3,143,354</u>	<u>\$ 3,119,516</u>	<u>\$ 23,838</u>	0.8

The effect on revenue for the year ended December 31, 2016 from changes in exchange rates versus the U.S. dollar was as follows:

	Year Ended December 31, 2016		
	At Avg. 2015 Rates ⁽¹⁾	Exchange Rate Effect ⁽²⁾	As Reported
	(in thousands)		
Revenue	\$ 3,174,361	\$ (31,007)	\$ 3,143,354

(1) Represents the financial statement balance that would have resulted had exchange rates in the reporting period been the same as those in effect in the prior year period.

(2) Represents the increase or decrease in the reported amount resulting from changes in exchange rates from those in effect in the prior year period.

The increase in revenue was primarily attributable to an increase in direct revenue transactions in our Goods category and other revenue. The increase was partially offset by the following:

- a \$62.5 million reduction related to countries that we operated in during the prior year period and have subsequently exited as part of our restructuring plan, dispositions our operations in India, Russia, Indonesia and Malaysia; and
- a \$31.0 million unfavorable impact from year-over-year changes in foreign currency exchange rates.

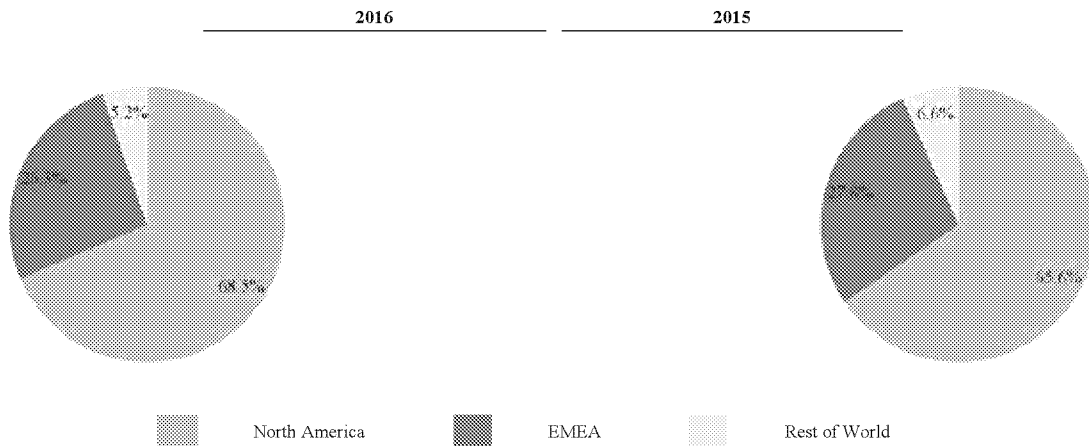
Total revenue attributable to the 11 countries that we plan to exit by early 2017 was \$129.7 million for the year ended December 31, 2016.

Revenue by Segment

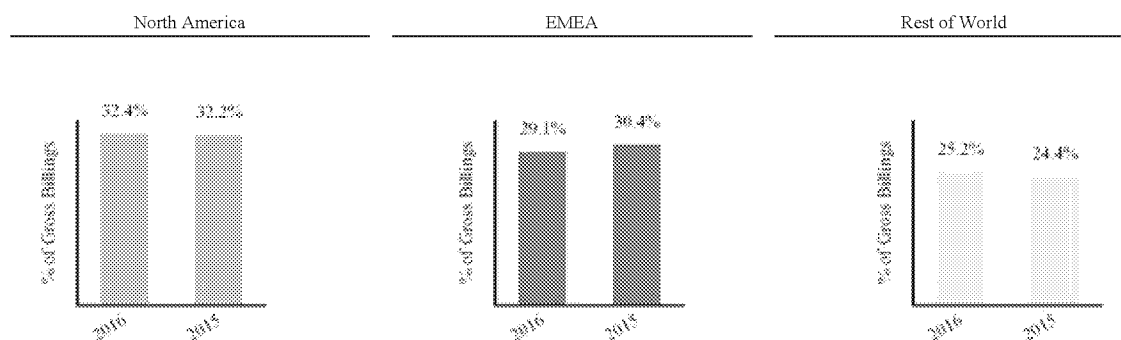
Revenue by segment for the years ended December 31, 2016 and 2015 was as follows:

	Year Ended December 31,			
	2016	2015	\$ Change	% Change
(dollars in thousands)				
North America:				
Third-party and other	\$ 853,959	\$ 790,194	\$ 63,765	8.1 %
Direct	1,297,810	1,257,548	40,262	3.2
Total segment revenue	2,151,769	2,047,742	104,027	5.1
EMEA:				
Third-party	312,669	405,510	(92,841)	(22.9)
Direct	514,527	462,370	52,157	11.3
Total segment revenue	827,196	867,880	(40,684)	(4.7)
Rest of World:				
Third-party	136,918	176,829	(39,911)	(22.6)
Direct	27,471	27,065	406	1.5
Total segment revenue	164,389	203,894	(39,505)	(19.4)
Total revenue	\$ 3,143,354	\$ 3,119,516	\$ 23,838	0.8

The percentages of revenue by segment for the years ended December 31, 2016 and 2015 were as follows:



The percentages of third-party and other gross billings that we retained after deducting the merchant's share for the years ended December 31, 2016 and 2015 were as follows:



Revenue by category and segment for the years ended December 31, 2016 and 2015 was as follows:

	North America		EMEA		Rest of World		Consolidated	
	Year Ended December 31,		Year Ended December 31,		Year Ended December 31,		Year Ended December 31,	
	2016	2015	2016	2015	2016	2015	2016	2015
(in thousands)								
Local ⁽¹⁾ :								
Third-party and other	\$ 762,314	\$ 701,312	\$ 241,683	\$ 302,085	\$ 88,488	\$ 107,381	\$ 1,092,485	\$ 1,110,778
Travel:								
Third-party	82,577	81,731	45,909	53,059	18,869	24,091	147,355	158,881
Total services	844,891	783,043	287,592	355,144	107,357	131,472	1,239,840	1,269,659
Goods:								
Third-party	9,068	7,151	25,077	50,366	29,561	45,357	63,706	102,874
Direct revenue	1,297,810	1,257,548	514,527	462,370	27,471	27,065	1,839,808	1,746,983
Total	1,306,878	1,264,699	539,604	512,736	57,032	72,422	1,903,514	1,849,857
Total revenue	\$ 2,151,769	\$ 2,047,742	\$ 827,196	\$ 867,880	\$ 164,389	\$ 203,894	\$ 3,143,354	\$ 3,119,516

(1) Includes revenue from deals with local and national merchants and through local events.

North America

The increase in North America segment revenue reflects increases in our Local and Goods categories. Those revenue increases resulted from the increases in gross billings. As discussed above, those increases were primarily attributable to our significant incremental marketing spend to accelerate customer growth, as well as our focus on increasing the coverage of our offerings and improving the quality of active offerings available through our marketplaces. Additionally, other revenue transactions in our Local category increased during the current year, which was primarily attributable to commission revenue earned when customers make purchases with retailers using digital coupons accessed through our websites and mobile applications.

The percentages of gross billings that we retained after deducting the merchant's share on third-party and other revenue transactions in our Local and Travel categories were 34.6% and 21.0%, respectively, which were consistent with the prior period.

We continue to focus more of our efforts on sourcing local deal offerings in sub-categories that provide the best opportunities for high frequency customer purchase behavior. These "high frequency use cases" include food and drink (including

take-out and delivery), health, beauty and wellness, and events and activities. In connection with these efforts, we may be willing to offer more attractive terms to merchants that could reduce our deal margins in future periods.

The revenue from Living Social was \$9.3 million from its October 31, 2016 acquisition date through year-end.

We sell Groupon gift cards that can be used to make purchases through our online marketplaces. Those gift cards have no expiration dates and administrative fees are not charged on unused gift cards. During the fourth quarter of the current year, we concluded that we had developed sufficient historical evidence regarding the pattern of customer redemptions of Groupon gift cards to have the ability to estimate the portion of gift cards that will never be redeemed ("breakage"). As a result, we recorded \$6.4 million of gift card breakage revenue for the year ended December 31, 2016, including \$4.3 million attributed to third party and other revenue and \$2.1 million attributed to direct revenue, which represented our estimate of cumulative gift card breakage through the balance sheet date based on the proportion of customer redemptions to total expected redemptions.

EMEA

The decrease in EMEA segment revenue reflects decreases in our Local and Travel categories and from third-party revenue transactions in our Goods category. Those revenue decreases were primarily attributable to the decreases in gross billings as discussed above in addition to the following:

- decreases in the percentage of gross billings that we retained after deducting the merchant's share for third-party revenue transactions in our Local, Travel and Goods categories. For the year ended December 31, 2016, those percentages decreased to 35.6% in our Local category, 20.6% in our Travel category and 14.6% in our Goods category, as compared to 37.9%, 21.3% and 17.6% in our Local, Travel and Goods categories, respectively, for the year ended December 31, 2015. We have been willing to accept lower deal margins in order to improve the quality and increase the number of deals offered to our customers by offering more attractive terms to merchants;
- a \$50.8 million reduction related to countries that we operated in during the prior year period and have subsequently exited as part of our restructuring plan and the disposition of our operations in Russia; and
- a \$14.4 million unfavorable impact from year-over-year changes in foreign currency exchange rates.

Those decreases were partially offset by an increase in direct revenue transactions in our Goods category.

Rest of World

The decrease in Rest of World segment revenue reflects decreases across our Local, Travel and Goods categories. The decrease in Rest of World revenue was primarily attributable to the decreases in gross billings as discussed above in addition to the following:

- a decrease in the percentage of gross billings that we retained after deducting the merchant's share in our Local category. For the year ended December 31, 2016, that percentage decreased to 27.0% as compared to 28.5% for the year ended December 31, 2015;
- a \$16.4 million unfavorable impact from year-over-year changes in foreign currency exchange rates; and
- an \$11.7 million reduction related to countries that we operated in during the prior year period and have subsequently exited as part of our restructuring plan and dispositions of our operations in India, Indonesia and Malaysia.

Those decreases were partially offset by an increase in the percentage of gross billings that we retained after deducting the merchant's share for third-party revenue transactions in our Travel and Goods categories. For the year ended December 31, 2016, those percentages increased to 20.7% in our Travel category and 23.6% in our Goods category, as compared to 20.0% and 19.9%, respectively, for the year ended December 31, 2015.

Comparison of the Years Ended December 31, 2015 and 2014 :

Revenue for the years ended December 31, 2015 and 2014 was as follows:

	Year Ended December 31,			
	2015	2014	\$ Change	% Change
	(in thousands)			
Revenue:				
Third-party	\$ 1,314,536	\$ 1,474,944	\$ (160,408)	(10.9)%
Direct	1,746,983	1,541,112	205,871	13.4
Other	57,997	26,067	31,930	122.5
Total revenue	<u>\$ 3,119,516</u>	<u>\$ 3,042,123</u>	<u>\$ 77,393</u>	<u>2.5</u>

The effect on revenue for the year ended December 31, 2015 from changes in exchange rates versus the U.S. dollar was as follows:

	Year Ended December 31, 2015		
	At Avg. 2014 Rates ⁽¹⁾	Exchange Rate Effect ⁽²⁾	As Reported
	(in thousands)		
Revenue	\$ 3,315,691	\$ (196,175)	\$ 3,119,516

(1) Represents the financial statement balance that would have resulted had exchange rates in the reporting period been the same as those in effect in the prior year period.

(2) Represents the increase or decrease in the reported amount resulting from changes in exchange rates from those in effect in the prior year period.

The increase in revenue was primarily attributable to the following:

- Increases in direct revenue from transactions in our Goods category and in other revenue; and
- Increases in third-party revenue driven by increases in the number of merchant relationships and the volume of offerings available on our marketplaces.

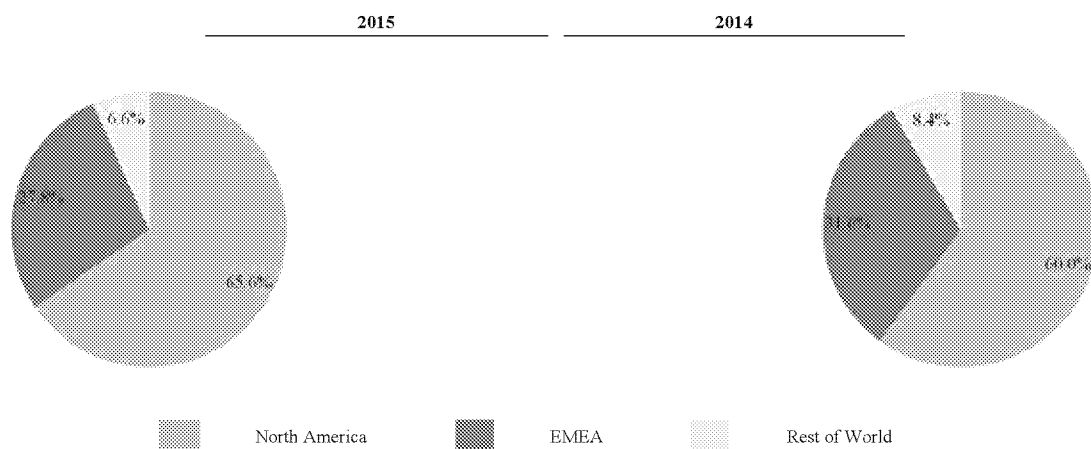
These increases were partially offset by a \$196.2 million unfavorable impact on revenue from year-over-year changes in foreign currency exchange rates for the year ended December 31, 2015 .

Revenue by Segment

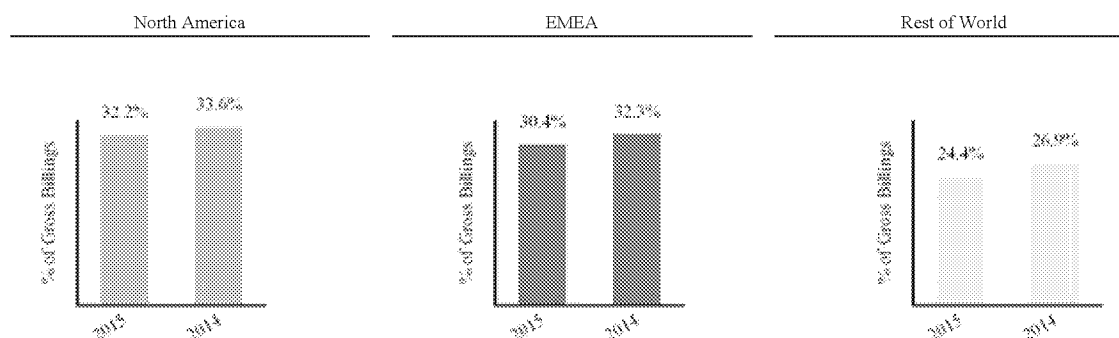
Revenue by segment for the years ended December 31, 2015 and 2014 was as follows:

	Year Ended December 31,			
	2015	2014	\$ Change	% Change
(dollars in thousands)				
North America:				
Third-party and other	\$ 790,194	\$ 749,548	\$ 40,646	5.4 %
Direct	1,257,548	1,074,913	182,635	17.0
Total segment revenue	2,047,742	1,824,461	223,281	12.2
EMEA:				
Third-party	405,510	518,786	(113,276)	(21.8)
Direct	462,370	442,344	20,026	4.5
Total segment revenue	867,880	961,130	(93,250)	(9.7)
Rest of World:				
Third-party	176,829	232,677	(55,848)	(24.0)
Direct	27,065	23,855	3,210	13.5
Total segment revenue	203,894	256,532	(52,638)	(20.5)
Total revenue	\$ 3,119,516	\$ 3,042,123	\$ 77,393	2.5

The percentages of revenue by segment for the years ended December 31, 2015 and 2014 were as follows:



The percentages of third-party and other gross billings that we retained after deducting the merchant's share for the years ended December 31, 2015 and 2014 were as follows:



Revenue by category and segment for the years ended December 31, 2015 and 2014 was as follows:

	North America		EMEA		Rest of World		Consolidated	
	Year Ended December 31,		Year Ended December 31,		Year Ended December 31,		Year Ended December 31,	
	2015	2014	2015	2014	2015	2014	2015	2014
(in thousands)								
Local ⁽¹⁾ :								
Third-party and other	\$ 701,312	\$ 674,605	\$ 302,085	\$ 391,179	\$ 107,381	\$ 147,248	\$ 1,110,778	\$ 1,213,032
Travel:								
Third-party	81,731	68,977	53,059	63,957	24,091	26,407	158,881	159,341
Total services	783,043	743,582	355,144	455,136	131,472	173,655	1,269,659	1,372,373
Goods:								
Third-party	7,151	5,966	50,366	63,650	45,357	59,022	102,874	128,638
Direct revenue	1,257,548	1,074,913	462,370	442,344	27,065	23,855	1,746,983	1,541,112
Total	1,264,699	1,080,879	512,736	505,994	72,422	82,877	1,849,857	1,669,750
Total revenue	\$ 2,047,742	\$ 1,824,461	\$ 867,880	\$ 961,130	\$ 203,894	\$ 256,532	\$ 3,119,516	\$ 3,042,123

(1) Includes revenue from deals with local and national merchants and through local events.

North America

The increase in North America segment revenue reflects increases across our Local, Travel and Goods categories. Those revenue increases were primarily attributable to the increases in gross billings as discussed above.

Those increases were partially offset by a decrease in the percentage of gross billings that we retained after deducting the merchant's share in our Local category. For the year ended December 31, 2015 that percentage decreased to 34.6%, as compared to 36.2% for the year ended December 31, 2014. This decrease in the percentage of gross billings that we retained after deducting the merchant's share reflects the overall results of individual deal-by-deal negotiations with merchants and can vary significantly from period-to-period. We were willing to accept lower deal margins in order to improve the quality and increase the number of deals offered to customers by offering more attractive terms to merchants.

We believe that increases in transaction activity on mobile devices and in the number of offerings contributed to the growth in revenue for our North America segment. In addition, we refined our approach to targeting customers and undertook

marketing initiatives to increase consumer awareness of deals available through our marketplaces, which we believe contributed to the revenue growth.

EMEA

The decrease in EMEA segment revenue reflects decreases in our Local and Travel categories and from third-party revenue transactions in our Goods category. Those revenue decreases were primarily attributable to the decreases in gross billings as discussed above in addition to the following:

- the decreases in the percentage of gross billings that we retained after deducting the merchant's share in our Local and Travel categories. For the year ended December 31, 2015, those percentages decreased to 37.9% in our Local category and 21.3% in our Travel category, as compared to 41.2% and 22.4%, respectively, for the year ended December 31, 2014; and
- a \$157.9 million unfavorable impact on revenue from year-over-year changes in foreign currency exchange rates for the year ended December 31, 2015.

The decreases in the percentage of gross billings that we retained during the year ended December 31, 2015 reflect the overall results of individual deal-by-deal negotiations with our merchants and can vary significantly from period-to-period. We were willing to accept lower deal margins, as compared to the year ended December 31, 2014, in order to improve the quality and increase the number of deals offered to our customers by offering more attractive terms to merchants.

The decrease in EMEA segment revenue was partially offset by an increase in direct revenue from our Goods category as a result of a shift to more direct revenue transactions in EMEA during 2015.

Rest of World

The decrease in Rest of World segment revenue reflects decreases in our Local and Travel categories and from third-party revenue transactions in our Goods category. Those revenue decreases were primarily attributable to the decreases in gross billings as discussed above in addition to the following:

- decreases in the percentage of gross billings that we retained after deducting the merchant's share in our Local category and from third-party revenue transactions in our Goods category. For the year ended December 31, 2015, those percentages decreased to 28.5% in our Local category and 19.9% on third-party revenue transactions in our Goods category, as compared to 32.6% and 21.2%, respectively, for the year ended December 31, 2014; and
- a \$36.9 million unfavorable impact on revenue from year-over-year changes in foreign currency exchange rates for the year ended December 31, 2015.

The decrease in revenue for our Rest of World segment was also driven by a decrease in active customers and units sold for the year ended December 31, 2015, as compared to the year ended December 31, 2014.

Cost of Revenue

Cost of revenue is comprised of direct and certain indirect costs incurred to generate revenue. For direct revenue transactions, cost of revenue includes the cost of inventory, shipping and fulfillment costs and inventory markdowns. Fulfillment costs are comprised of third-party logistics provider costs, as well as rent, depreciation, personnel costs and other costs of operating our fulfillment center. For third-party revenue transactions, cost of revenue includes estimated refunds for which the merchant's share is not recoverable. Other costs incurred to generate revenue, which include credit card processing fees, editorial costs, compensation expense for technology support personnel who are responsible for maintaining the infrastructure of the Company's websites, amortization of internal-use software relating to customer-facing applications, web hosting and other processing fees, are attributed to cost of third-party revenue, direct revenue and other revenue in proportion to gross billings during the period.

Comparison of the Years Ended December 31, 2016 and 2015 :

Cost of revenue on third-party, direct revenue and other revenue for the years ended December 31, 2016 and 2015 was as follows:

	Year Ended December 31,			
	2016	2015	\$ Change	% Change
(in thousands)				
Cost of revenue:				
Third-party	\$ 164,667	\$ 168,964	\$ (4,297)	(2.5)%
Direct	1,614,723	1,545,519	69,204	4.5
Other	7,061	19,968	(12,907)	(64.6)
Total cost of revenue	<u>\$ 1,786,451</u>	<u>\$ 1,734,451</u>	<u>\$ 52,000</u>	<u>3.0</u>

The effect on cost of revenue for the year ended December 31, 2016 from changes in exchange rates versus the U.S. dollar was as follows:

	Year Ended December 31,		
	At Avg. 2015 Rates ⁽¹⁾	Exchange Rate Effect ⁽²⁾	As Reported
(in thousands)			
Cost of revenue	\$ 1,799,195	\$ (12,744)	\$ 1,786,451

(1) Represents the financial statement balance that would have resulted had exchange rates in the reporting period been the same as those in effect in the prior year period.

(2) Represents the increase or decrease in the reported amount resulting from changes in exchange rates from those in effect in the prior year period.

The increase in total cost of revenue was primarily attributable to the growth in direct revenue from our Goods category. The increase was partially offset by the following:

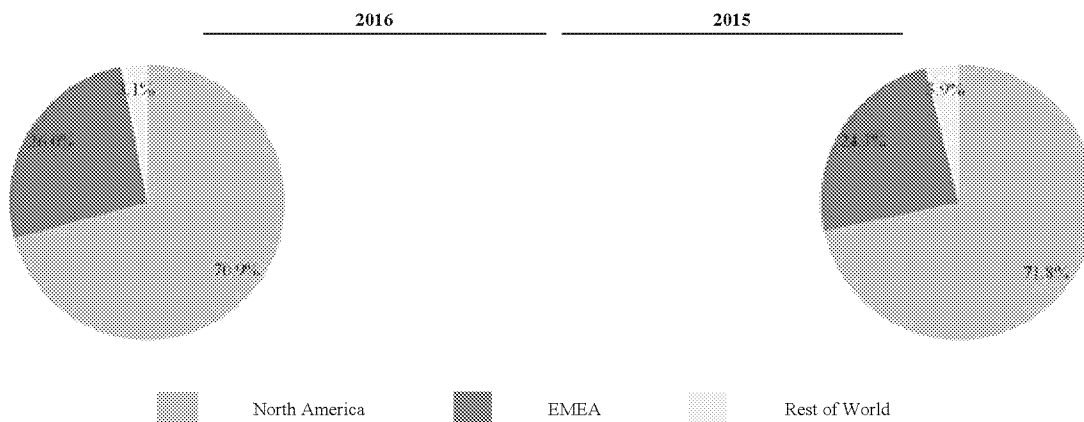
- a \$26.4 million reduction related to countries that we operated in during the prior year period and have subsequently exited as part of our restructuring plan, dispositions of our operations in India, Russia, Indonesia and Malaysia; and
- a \$12.7 million favorable impact from year-over-year changes in foreign currency exchange rates.

Cost of Revenue by Segment

Cost of revenue by segment for the years ended December 31, 2016 and 2015 was as follows:

	Year Ended December 31,			
	2016	2015	\$ Change	% Change
(dollars in thousands)				
North America:				
Third-party and other	\$ 121,151	116,343	\$ 4,808	4.1 %
Direct	1,145,071	1,129,828	15,243	1.3
Total segment cost of revenue	1,266,222	1,246,171	20,051	1.6
EMEA:				
Third-party	22,840	32,454	(9,614)	(29.6)
Direct	441,950	389,862	52,088	13.4
Total segment cost of revenue	464,790	422,316	42,474	10.1
Rest of World:				
Third-party	27,737	40,135	(12,398)	(30.9)
Direct	27,702	25,829	1,873	7.3
Total segment cost of revenue	55,439	65,964	(10,525)	(16.0)
Total cost of revenue	\$ 1,786,451	1,734,451	\$ 52,000	3.0

The percentages of cost of revenue by segment for the years ended December 31, 2016 and 2015 were as follows:



Cost of revenue by category and segment for the years ended December 31, 2016 and 2015 was as follows:

	North America		EMEA		Rest of World		Consolidated	
	Year Ended December 31,		Year Ended December 31,		Year Ended December 31,		Year Ended December 31,	
	2016	2015	2016	2015	2016	2015	2016	2015
(in thousands)								
Local ⁽¹⁾ :								
Third-party and other	\$ 101,331	\$ 100,419	\$ 15,501	\$ 19,205	\$ 13,088	\$ 15,196	\$ 129,920	\$ 134,820
Travel:								
Third-party	18,222	14,704	3,781	5,665	4,168	5,274	26,171	25,643
Total services	119,553	115,123	19,282	24,870	17,256	20,470	156,091	160,463
Goods:								
Third-party	1,598	1,220	3,558	7,584	10,481	19,665	15,637	28,469
Direct	1,145,071	1,129,828	441,950	389,862	27,702	25,829	1,614,723	1,545,519
Total	1,146,669	1,131,048	445,508	397,446	38,183	45,494	1,630,360	1,573,988
Total cost of revenue	\$ 1,266,222	\$ 1,246,171	\$ 464,790	\$ 422,316	\$ 55,439	\$ 65,964	\$ 1,786,451	\$ 1,734,451

(1) Includes cost of revenue from deals with local and national merchants and through local events.

North America

The increase in North America cost of revenue was primarily attributable to the growth in direct revenue from our Goods category, partially offset by an increase in margins in that category.

EMEA

The increase in EMEA cost of revenue was primarily attributable to the growth in direct revenue from our Goods category. The increase was partially offset by a reduction related to countries that we operated in during the year ended December 31, 2015 and have subsequently exited as part of our restructuring plan and the disposition of our operations in Russia.

Rest of World

The decrease in Rest of World cost of revenue was primarily attributable to the following:

- an \$8.9 million favorable impact from year-over-year changes in foreign currency exchange rates; and
- a reduction related to countries that we operated in during the prior year period and have subsequently exited as part of our restructuring plan and dispositions of our operations in India, Indonesia and Malaysia.

Comparison of the Years Ended December 31, 2015 and 2014 :

Cost of revenue on third-party, direct revenue and other revenue for the years ended December 31, 2015 and 2014 was as follows:

	Year Ended December 31,			
	2015	2014	\$ Change	% Change
	(in thousands)			
Cost of revenue:				
Third-party	\$ 168,964	\$ 187,151	\$ (18,187)	(9.7)%
Direct	1,545,519	1,373,756	171,763	12.5
Other	19,968	15,907	4,061	25.5
Total cost of revenue	\$ 1,734,451	\$ 1,576,814	\$ 157,637	10.0

The effect on cost of revenue for the year ended December 31, 2015 from changes in exchange rates versus the U.S. dollar was as follows:

	Year Ended December 31,		
	At Avg. 2014 Rates ⁽¹⁾	Exchange Rate Effect ⁽²⁾	As Reported
	(in thousands)		
Cost of revenue	\$ 1,826,976	\$ (92,525)	\$ 1,734,451

- (1) Represents the financial statement balance that would have resulted had exchange rates in the reporting period been the same as those in effect in the prior year period.
(2) Represents the increase or decrease in the reported amount resulting from changes in exchange rates from those in effect in the prior year period.

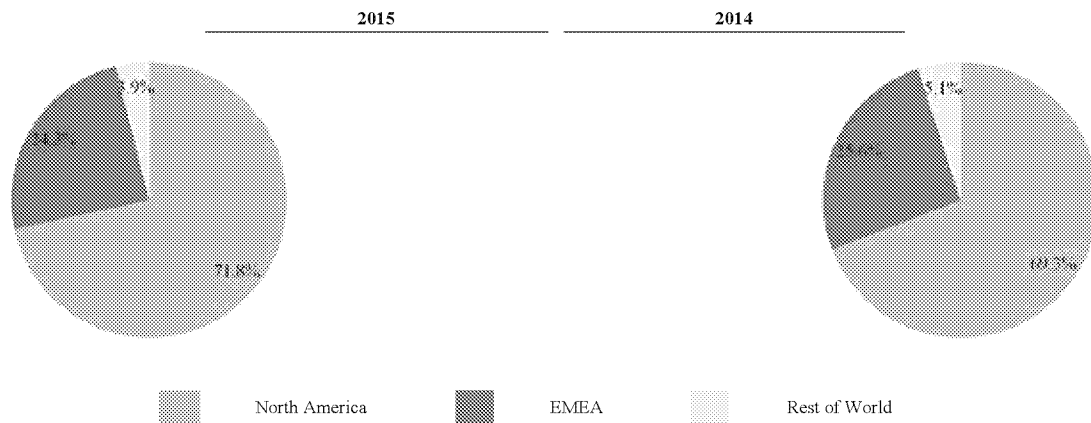
The increase in total cost of revenue was primarily attributable to the growth in direct revenue from our Goods category, partially offset by a decrease in related shipping and fulfillment costs on direct revenue deals.

Cost of Revenue by Segment

Cost of revenue by segment for the years ended December 31, 2015 and 2014 was as follows:

	Year Ended December 31,			
	2015	2014	\$ Change	% Change
	(dollars in thousands)			
North America:				
Third-party and other	\$ 116,343	106,375	\$ 9,968	9.4 %
Direct	1,129,828	986,103	143,725	14.6
Total segment cost of revenue	1,246,171	1,092,478	153,693	14.1
EMEA:				
Third-party	32,454	39,578	(7,124)	(18.0)
Direct	389,862	364,638	25,224	6.9
Total segment cost of revenue	422,316	404,216	18,100	4.5
Rest of World:				
Third-party	40,135	57,105	(16,970)	(29.7)
Direct	25,829	23,015	2,814	12.2
Total segment cost of revenue	65,964	80,120	(14,156)	(17.7)
Total cost of revenue	\$ 1,734,451	\$ 1,576,814	\$ 157,637	10.0

The percentages of cost of revenue by segment for the years ended December 31, 2015 and 2014 were as follows:



Cost of revenue by category and segment for the years ended December 31, 2015 and 2014 was as follows:

	North America		EMEA		Rest of World		Consolidated	
	Year Ended December 31,		Year Ended December 31,		Year Ended December 31,		Year Ended December 31,	
	2015	2014	2015	2014	2015	2014	2015	2014
(in thousands)								
Local ⁽¹⁾ :								
Third-party and other	\$ 100,419	\$ 93,538	\$ 19,205	\$ 26,634	\$ 15,196	\$ 21,905	\$ 134,820	\$ 142,077
Travel:								
Third-party	14,704	11,983	5,665	4,728	5,274	6,475	25,643	23,186
Total services	115,123	105,521	24,870	31,362	20,470	28,380	160,463	165,263
Goods:								
Third-party	1,220	854	7,584	8,216	19,665	28,725	28,469	37,795
Direct	1,129,828	986,103	389,862	364,638	25,829	23,015	1,545,519	1,373,756
Total	1,131,048	986,957	397,446	372,854	45,494	51,740	1,573,988	1,411,551
Total cost of revenue	\$ 1,246,171	\$ 1,092,478	\$ 422,316	\$ 404,216	\$ 65,964	\$ 80,120	\$ 1,734,451	\$ 1,576,814

(1) Includes cost of revenue from deals with local and national merchants and through local events.

North America

The increase in North America cost of revenue was primarily attributable to the growth in direct revenue from our Goods category.

EMEA

The increase in EMEA cost of revenue was primarily attributable to the growth in direct revenue from our Goods category, partially offset by an \$80.8 million favorable impact on cost of revenue from year-over-year changes in foreign currency exchange rates for the year ended December 31, 2015.

Rest of World

The decrease in Rest of World cost of revenue was primarily attributable to the following:

- the decrease in revenue from our Local and Goods categories; and
- an \$11.6 million favorable impact on cost of revenue from year-over-year changes in foreign currency exchange rates for the year ended December 31, 2015.

Gross Profit**Comparison of the Years Ended December 31, 2016 and 2015 :**

Gross profit for the year ended December 31, 2016 and 2015 was as follows:

	Year Ended December 31,			
	2016	2015	\$ Change	% Change
	(dollars in thousands)			
Gross profit:				
Third-party	\$ 1,049,044	\$ 1,145,572	\$ (96,528)	(8.4)%
Direct	225,085	201,464	23,621	11.7
Other	82,774	38,029	44,745	117.7
Total gross profit	\$ 1,356,903	\$ 1,385,065	\$ (28,162)	(2.0)

The effect on gross profit for the year ended December 31, 2016 from changes in exchange rates versus the U.S. dollar was as follows:

	Year Ended December 31, 2016		
	At Avg. 2015 Rates ⁽¹⁾	Exchange Rate Effect ⁽²⁾	As Reported
	(in thousands)		
Gross profit	\$ 1,375,166	\$ (18,263)	\$ 1,356,903

(1) Represents the financial statement balance that would have resulted had exchange rates in the reporting period been the same as those in effect in the prior year period.

(2) Represents the increase or decrease in the reported amount resulting from changes in exchange rates from those in effect in the prior year period.

The decrease in total gross profit was primarily attributable to the following:

- decreases in third-party and other revenue from our EMEA and Rest of World segments as discussed above;
- increases in cost of revenue from our EMEA segment as discussed above;
- a \$36.1 million reduction related to countries that we operated in during the prior year period and have subsequently exited as part of our restructuring plan and dispositions of our operations in India, Russia, Indonesia and Malaysia; and
- an \$18.3 million unfavorable impact from year-over-year changes in foreign currency exchange rates.

Those decreases in gross profit were partially offset by the following:

- a \$25.0 million increase from direct revenue transactions in the Goods category within our North America segment as discussed above, which reflects the impact of improved margins on those transactions;
- a \$15.3 million increase from third-party revenue transactions in the Local category within our North America segment as discussed above; and
- a \$44.8 million increase from other revenue transactions in the Local category within our North America segment. The increase in gross profit from other revenue transactions was primarily attributable to commission revenue earned when customers make purchases with retailers using digital coupons accessed through our websites and mobile applications.

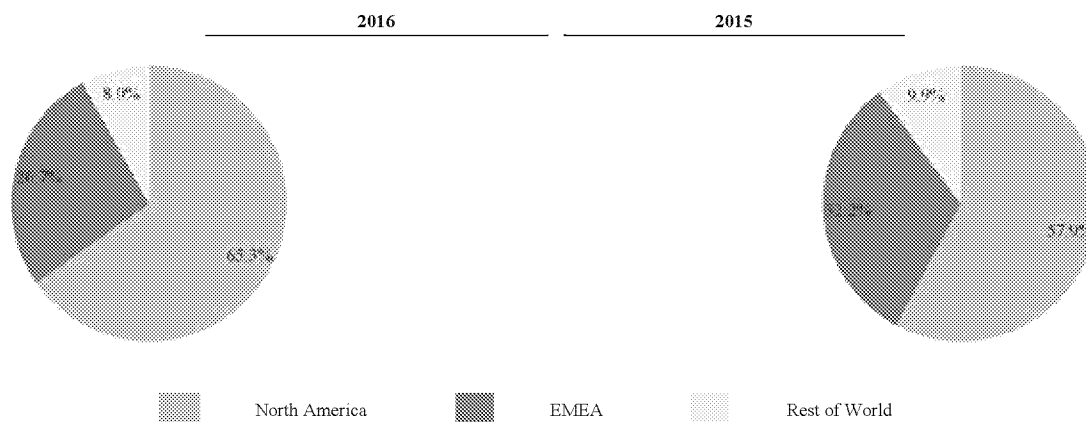
Total gross profit attributable to the 11 countries that we plan to exit by early 2017 was \$76.2 million for the year ended December 31, 2016.

Gross Profit by Segment

Gross profit by segment for the year ended December 31, 2016 and 2015 was as follows:

	Year Ended December 31, 2016			
	2016	2015	\$ Change	% Change
(dollars in thousands)				
North America:				
Third-party and other	\$ 732,808	\$ 673,851	\$ 58,957	8.7 %
% of gross billings	27.8 %	27.5%		
% of revenue	85.8 %	85.3%		
Direct	\$ 152,739	\$ 127,720	25,019	19.6
% of gross billings and revenue	11.8 %	10.2%		
EMEA:				
Third-party	\$ 289,829	\$ 373,056	(83,227)	(22.3)
% of gross billings	27.0 %	28.0%		
% of revenue	92.7 %	92.0%		
Direct	\$ 72,577	\$ 72,508	69	0.1
% of gross billings and revenue	14.1 %	15.7%		
Rest of World:				
Third-party	\$ 109,181	\$ 136,694	(27,513)	(20.1)
% of gross billings	20.1 %	18.9%		
% of revenue	79.7 %	77.3%		
Direct	\$ (231)	\$ 1,236	(1,467)	(118.7)
% of gross billings and revenue	(0.8)%	4.6%		

The percentages of gross profit by segment for the year ended December 31, 2016 and 2015 were as follows:



Gross profit by category and segment for the year ended December 31, 2016 and 2015 was as follows:

	North America		EMEA		Rest of World		Consolidated	
	Year Ended December 31,		Year Ended December 31,		Year Ended December 31,		Year Ended December 31,	
	2016	2015	2016	2015	2016	2015	2016	2015
(in thousands)								
Local ⁽¹⁾ :								
Third-party and other	\$ 660,983	\$ 600,893	\$ 226,182	\$ 282,880	\$ 75,400	\$ 92,185	\$ 962,565	\$ 975,958
Travel:								
Third-party	64,355	67,027	42,128	47,394	14,701	18,817	121,184	133,238
Total services	725,338	667,920	268,310	330,274	90,101	111,002	1,083,749	1,109,196
Goods:								
Third-party	7,470	5,931	21,519	42,782	19,080	25,692	48,069	74,405
Direct	152,739	127,720	72,577	72,508	(231)	1,236	225,085	201,464
Total	160,209	133,651	94,096	115,290	18,849	26,928	273,154	275,869
Total gross profit	\$ 885,547	\$ 801,571	\$ 362,406	\$ 445,564	\$ 108,950	\$ 137,930	\$ 1,356,903	\$ 1,385,065

(1) Includes gross profit from deals with local and national merchants and through local events.

North America

The increase in North America gross profit was attributable to the following:

- a \$15.3 million increase from third-party revenue transactions and a \$44.8 million increase from other revenue transactions in our Local category. The increase in gross profit from other revenue transactions in our Local category was primarily attributable to commission revenue earned when customers make purchases with retailers using digital coupons accessed through our websites and mobile applications; and
- a \$25.0 million increase from direct revenue transactions in our Goods category, which was primarily driven by an increase in gross profit margin to 11.8% for the year ended December 31, 2016, as compared to 10.2% for the year ended December 31, 2015. The improvement in our gross margins resulted from our strategic initiative to de-emphasize lower margin product offerings and reduce our shipping and fulfillment costs.

EMEA

The decrease in EMEA gross profit was primarily attributable to the following:

- the decreases in third-party and other revenue across all three of our categories;
- a \$28.5 million reduction related to countries that we operated in during the year ended December 31, 2015 and have subsequently exited as part of our restructuring plan and the disposition of our operations in Russia; and
- a \$10.6 million unfavorable impact from year-over-year changes in foreign currency exchange rates.

Rest of World

The decrease in Rest of World gross profit was primarily attributable to the following:

- the decreases in third-party and other revenue across all three of our categories;
- a \$7.5 million unfavorable impact from year-over-year changes in foreign currency exchange rates; and
- a \$7.6 million reduction related to countries that we operated in during the prior year period and have subsequently exited as part of our restructuring plan and dispositions of our operations in India, Indonesia and Malaysia.

Comparison of the Years Ended December 31, 2015 and 2014 :

Gross profit for the year ended December 31, 2015 and 2014 was as follows:

	Year Ended December 31,			
	2015	2014	\$ Change	% Change
	(dollars in thousands)			
Gross profit:				
Third-party	\$ 1,145,572	\$ 1,287,793	\$ (142,221)	(11.0)%
Direct	201,464	167,356	34,108	20.4
Other	38,029	10,160	27,869	274.3
Total gross profit	<u>\$ 1,385,065</u>	<u>\$ 1,465,309</u>	<u>\$ (80,244)</u>	<u>(5.5)</u>

The effect on gross profit for the year ended December 31, 2015 from changes in exchange rates versus the U.S. dollar was as follows:

	Year Ended December 31, 2015		
	At Avg. 2014 Rates ⁽¹⁾	Exchange Rate Effect ⁽²⁾	As Reported
	(in thousands)		
Gross profit	\$ 1,488,715	\$ (103,650)	\$ 1,385,065

(1) Represents the financial statement balance that would have resulted had exchange rates in the reporting period been the same as those in effect in the prior year period.

(2) Represents the increase or decrease in the reported amount resulting from changes in exchange rates from those in effect in the prior year period.

The decrease in total gross profit was primarily attributable to the following:

- decreases in third-party revenue as discussed above; and
- a \$103.7 million unfavorable impact on gross profit from year-over-year changes in foreign currency exchange rates for the year ended December 31, 2015.

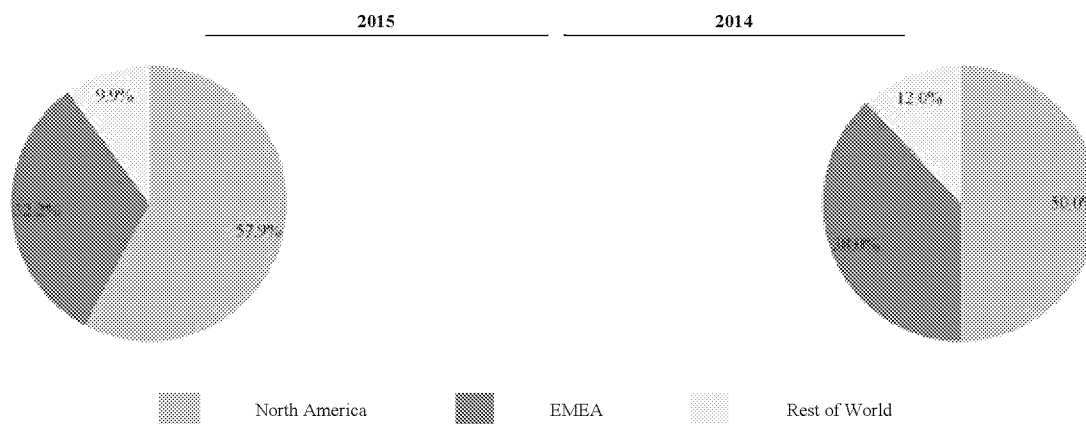
Those decreases were partially offset by increases in gross profit from direct revenue transactions in our Goods category.

Gross Profit by Segment

Gross profit by segment for the year ended December 31, 2015 and 2014 was as follows:

	Year Ended December 31,			
	2015	2014	\$ Change	% Change
(dollars in thousands)				
North America:				
Third-party and other	\$ 673,851	\$ 643,173	\$ 30,678	4.8 %
% of gross billings	27.5%	28.9%		
% of revenue	85.3%	85.8%		
Direct	\$ 127,720	\$ 88,810	38,910	43.8
% of gross billings and revenue	10.2%	8.3%		
EMEA:				
Third-party	\$ 373,056	\$ 479,208	(106,152)	(22.2)
% of gross billings	28.0%	29.9%		
% of revenue	92.0%	92.4%		
Direct	\$ 72,508	\$ 77,706	(5,198)	(6.7)
% of gross billings and revenue	15.7%	17.6%		
Rest of World:				
Third-party	\$ 136,694	\$ 175,572	(38,878)	(22.1)
% of gross billings	18.9%	20.3%		
% of revenue	77.3%	75.5%		
Direct	\$ 1,236	\$ 840	396	47.1
% of gross billings and revenue	4.6%	3.5%		

The percentages of gross profit by segment for the year ended December 31, 2015 and 2014 were as follows:



Gross profit by category and segment for the year ended December 31, 2015 and 2014 was as follows:

	North America		EMEA		Rest of World		Consolidated	
	Year Ended December 31,		Year Ended December 31,		Year Ended December 31,		Year Ended December 31,	
	2015	2014	2015	2014	2015	2014	2015	2014
(in thousands)								
Local ⁽¹⁾ :								
Third-party and other	\$ 600,893	\$ 581,067	\$ 282,880	\$ 364,545	\$ 92,185	\$ 125,343	\$ 975,958	\$ 1,070,955
Travel:								
Third-party	67,027	56,994	47,394	59,229	18,817	19,932	133,238	136,155
Total services	667,920	638,061	330,274	423,774	111,002	145,275	1,109,196	1,207,110
Goods:								
Third-party	5,931	5,112	42,782	55,434	25,692	30,297	74,405	90,843
Direct	127,720	88,810	72,508	77,706	1,236	840	201,464	167,356
Total	133,651	93,922	115,290	133,140	26,928	31,137	275,869	258,199
Total gross profit	\$ 801,571	\$ 731,983	\$ 445,564	\$ 556,914	\$ 137,930	\$ 176,412	\$ 1,385,065	\$ 1,465,309

(1) Includes gross profit from deals with local and national merchants and through local events.

North America

The increase in North America gross profit was primarily attributable to the following:

- the improvement in gross profit margins on direct revenue transactions in our Goods category; and
- increases in third-party revenue in our Local and Travel categories as discussed above.

EMEA

The decrease in EMEA gross profit was primarily attributable to the following:

- decreases in third-party and other revenue across all three of our categories as discussed above;
- a decrease in gross profit margins on direct revenue transactions in our Goods category; and
- a \$77.1 million unfavorable impact on gross profit from year-over-year changes in foreign currency exchange rates for the year ended December 31, 2015.

Rest of World

The decrease in Rest of World gross profit was primarily attributable to the following:

- decreases in third-party and other revenue across all three of our categories as discussed above; and
- a \$25.4 million unfavorable impact on gross profit from year-over-year changes in foreign currency exchange rates for the year ended December 31, 2015.

Marketing

Marketing expense consists primarily of online marketing costs, such as search engine marketing, advertising on social networking sites and affiliate programs and offline marketing costs such as television and radio advertising. Additionally, compensation expense for marketing employees is classified within marketing expense. We record these costs within "Marketing" on the consolidated statements of operations when incurred. From time to time, we offer deals with well-known national merchants for customer acquisition and activation purposes, for which the amount we owe the merchant for each voucher sold exceeds the transaction price paid by the customer. Our gross billings from those transactions generate no third-party revenue and our net cost (i.e., the excess of the amount owed to the merchant over the amount paid by the customer) is classified as marketing expense. We evaluate marketing expense as a percentage of gross billings and revenue because it gives us an indication of how well our marketing spend is driving gross billings and revenue growth.

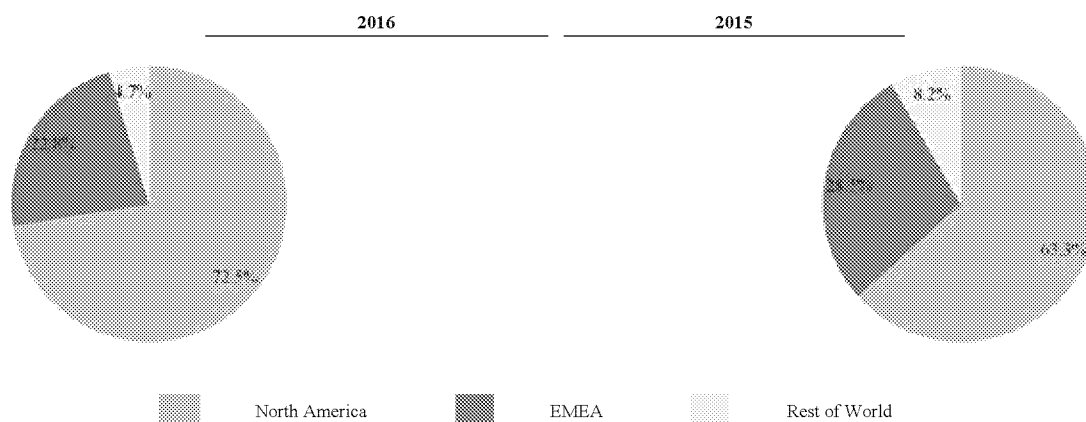
Comparison of the Years Ended December 31, 2016 and 2015 :

Marketing expense by segment as a percentage of gross billings and as a percentage of segment revenue for the year ended December 31, 2016 and 2015 was as follows:

	Year Ended December 31,						
	2016	% of Segment Gross Billings	% of Segment Revenue	2015	% of Segment Gross Billings	% of Segment Revenue	
(dollars in thousands)							
North America	\$ 263,206	6.7%	12.2%	\$ 160,878	4.3%	7.9%	\$ 102,328 63.6 %
EMEA	82,612	5.2	10.0	72,499	4.0	8.4	10,113 13.9
Rest of World	17,133	3.0	10.4	20,958	2.8	10.3	(3,825) (18.3)
Total marketing	<u>\$ 362,951</u>	6.0	11.5	<u>\$ 254,335</u>	4.1	8.2	<u>\$ 108,616</u> 42.7

The increase in total marketing expense resulted from our strategic initiative to invest in marketing to drive new customer acquisition. The incremental spending has primarily been focused on online marketing channels, such as search engine marketing, display and mobile advertising. In addition, we have increased our spend on offline activities such as radio and television advertising. We also increased our spending on affiliate programs that utilize third parties to promote our offerings online.

The percentages of marketing expense by segment for the year ended December 31, 2016 and 2015 were as follows:

*North America*

The increase in North America marketing expense resulted from our strategic initiative to invest in marketing to drive new customer acquisition. In connection with this initiative, which commenced in November 2015, we have extended our return on investment thresholds for customer acquisition marketing spending to periods generally ranging from 12 - 18 months, as compared to approximately six months previously. That incremental spending has primarily been focused on online marketing channels, such as search engine marketing, display and mobile advertising. In addition, we have increased our spend on offline activities such as radio advertising and, beginning in the second quarter 2016, on television advertising. We also increased our spending on affiliate programs that utilize third parties to promote our offerings online.

EMEA

The increase in EMEA marketing expense resulted from our increased investment in marketing to drive new customer acquisition, partially offset by a reduction related to countries that we operated in during the prior year period and have subsequently exited as part of our restructuring plan and the disposition of our operations in Russia. This increase was partially offset by a \$0.9 million favorable impact from year-over-year changes in foreign currency exchange rates.

Rest of World

Marketing expense as a percentage of gross billings for the year ended December 31, 2016 was substantially consistent with the prior year period.

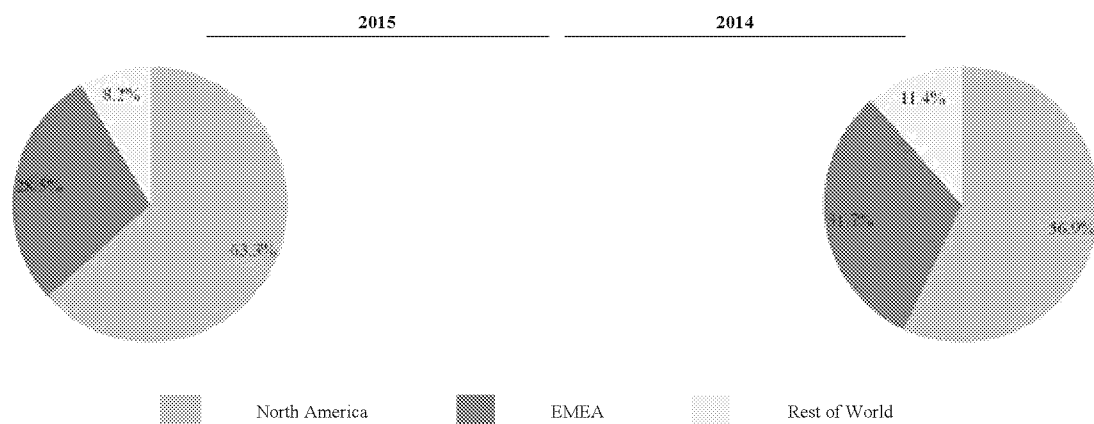
Comparison of the Years Ended December 31, 2015 and 2014 :

Marketing expense by segment as a percentage of gross billings and as a percentage of segment revenue for the year ended December 31, 2015 and 2014 was as follows:

	Year Ended December 31,							
	2015	% of Segment Gross Billings	% of Segment Revenue	2014	% of Segment Gross Billings	% of Segment Revenue	\$ Change	% Change
(dollars in thousands)								
North America	\$ 160,878	4.3%	7.9%	\$ 137,648	4.2%	7.5%	\$ 23,230	16.9 %
EMEA	72,499	4.0	8.4	76,752	3.7	8.0	(4,253)	(5.5)
Rest of World	20,958	2.8	10.3	27,554	3.1	10.7	(6,596)	(23.9)
Total marketing	<u>\$ 254,335</u>	4.1	8.2	<u>\$ 241,954</u>	3.9	8.0	<u>\$ 12,381</u>	5.1

The increase in total marketing expense was consistent with the increases in gross billings and revenue for the year ended December 31, 2015 as compared to the year ended December 31, 2014.

The percentages of marketing expense by segment for the year ended December 31, 2015 and 2014 were as follows:

*North America*

The increase in North America marketing expense was primarily attributable to increased spending on online marketing channels, such as search engine marketing, display and mobile advertising and affiliate programs that utilize third parties to promote our deals online, in connection with our initiatives to grow our active customer base and increase awareness of our marketplace.

EMEA

The decrease in EMEA marketing expense was primarily due to changes in foreign currency exchange rates, partially offset by a \$6.7 million write-off of a prepaid asset related to a marketing program that was discontinued because the counterparty ceased operations. The favorable impact on EMEA marketing from year-over-year changes in foreign currency exchange rates for the year ended December 31, 2015 was \$11.4 million.

Rest of World

The decrease in Rest of World marketing expense was primarily due to reduced spending on online marketing channels, such as search engine marketing and display advertising. The favorable impact on Rest of World marketing from year-over-year changes in foreign currency exchange rates for the year ended December 31, 2015 was \$3.7 million.

Selling, General and Administrative

Selling expenses reported within "Selling, general and administrative" on the consolidated statements of operations consist of sales commissions and other compensation expenses for sales representatives, as well as costs associated with supporting the sales function such as technology, telecommunications and travel. General and administrative expenses include compensation expense for employees involved in customer service, operations and technology and product development, as well as general corporate functions, such as finance, legal and human resources. Additional costs included in general and administrative include depreciation and amortization, rent, professional fees, litigation costs, travel and entertainment, recruiting, office supplies, maintenance, certain technology costs and other general corporate costs.

Comparison of the Years Ended December 31, 2016 and 2015 :

Selling, general and administrative expense ("SG&A") for the year ended December 31, 2016 and 2015 was as follows:

	Year Ended December 31,			
	2016	2015	\$ Change	% Change
(dollars in thousands)				
Selling, general and administrative	\$ 1,066,168	\$ 1,192,792	\$ (126,624)	(10.6)%
% of gross billings	17.5%	19.1%		
% of revenue	33.9%	38.2%		

The decrease in SG&A was primarily attributable to the following:

- a \$57.1 million decrease in compensation-related costs in our ongoing markets due to headcount reductions as part of our restructuring plan;
- a \$40.9 million reduction related to countries that we operated in during the prior year period and have subsequently exited as part of our restructuring plan and dispositions of our operations in India, Russia, Indonesia and Malaysia; and
- a \$37.5 million expense incurred in the prior year period relating to our securities litigation matter that has been subsequently settled.

The favorable impact on SG&A due to year-over-year changes in foreign currency exchange rates was \$15.4 million.

We currently expect that SG&A costs will generally continue to decrease during 2017 as a result of the cost savings from our restructuring program and other initiatives.

Comparison of the Years Ended December 31, 2015 and 2014 :

SG&A for the year ended December 31, 2015 and 2014 was as follows:

	Year Ended December 31,			
	2015	2014	\$ Change	% Change
(dollars in thousands)				
Selling, general and administrative	\$ 1,192,792	\$ 1,191,385	\$ 1,407	0.1%
% of gross billings	19.1%	19.1%		
% of revenue	38.2%	39.2%		

The increase in SG&A was primarily attributable to the following:

- a \$37.5 million increase in the contingent liability related to our securities litigation matter;

- a \$25.3 million increase in stock-based compensation; and
- a \$6.2 million increase in depreciation and amortization.

These increases were partially offset by a \$64.3 million decrease in payroll expense.

The favorable impact on SG&A due to year-over-year changes in foreign currency exchange rates was \$84.6 million .

Gains on Business Dispositions

During the second quarter of 2016, we sold our subsidiary in Russia and our point of sale business in the U.S., resulting in gains of \$8.9 million and \$0.4 million , respectively. During the third quarter of 2016, we sold our subsidiary in Indonesia resulting in a gain of \$2.1 million . During the fourth quarter of 2016, we sold our subsidiary in Malaysia resulting in a gain of \$0.3 million . During the third quarter of 2015, we sold a controlling stake in our subsidiary in India resulting in a gain of \$13.7 million. See Note 3, *Discontinued Operations and Other Dispositions*, for additional information.

The financial results of those entities are presented within income from continuing operations in the accompanying consolidated financial statements through their respective disposition dates. Those financial results were not material for the years ended December 31, 2016, 2015 and 2014.

Restructuring Charges

Restructuring charges represent severance and benefit costs for workforce reductions, impairments of long-lived assets and other exit costs resulting from our restructuring activities. See Note 13, *Restructuring*, for information about our restructuring plan.

Income (Loss) from Operations

Comparison of the Years Ended December 31, 2016 and 2015 :

Income (loss) from operations for the year ended December 31, 2016 and 2015 was as follows:

	Year Ended December 31,			
	2016	2015	\$ Change	% Change
	(dollars in thousands)			
Income (loss) from operations	\$ (109,763)	\$ (79,777)	\$ (29,986)	(37.6)%

The increase in our loss from operations was primarily attributable to the following:

- a \$108.6 million increase in marketing expense;
- a \$28.2 million decrease in gross profit; and
- a \$14.0 million increase in restructuring charges.

Those decreases were partially offset by a \$126.6 million decrease in SG&A.

Segment Operating Income

Segment operating income (loss) excludes stock-based compensation and acquisition-related expense (benefit), net. Segment operating income (loss) for the year ended December 31, 2016 and 2015 was as follows:

	Year Ended December 31,		
	2016	2015	\$ Change
	(in thousands)		
North America ⁽¹⁾	\$ 24,935	\$ 18,099	\$ 6,836
EMEA ⁽¹⁾	14,019	70,094	(56,075)
Rest of World ⁽¹⁾	(25,746)	(24,379)	(1,367)

- (1) Segment cost of revenue and operating expenses and segment operating income (loss) exclude stock-based compensation and acquisition-related (benefit) expense, net. This presentation corresponds to the measure of segment profit or loss that our chief operating decision-maker uses in assessing segment performance and making resource allocation decisions. The following table summarizes the our stock-based compensation expense and acquisition-related expense (benefit), net by reportable segment for the year ended December 31, 2016 and 2015 (in thousands):

	Year Ended December 31,			
	2016		2015	
	Stock-based compensation	Acquisition-related	Stock-based compensation	Acquisition-related
North America	\$ 104,708	\$ 5,650	\$ 124,078	\$ 1,857
EMEA	7,220	—	11,445	—
Rest of World	6,224	—	6,546	—
Consolidated	\$ 118,152	\$ 5,650	\$ 142,069	\$ 1,857

- The increase in our North America segment operating income was primarily from increases in gross profit from third party and other revenue transactions in our Local category and direct revenue transactions in our Goods category as described above. The increase in segment operating income was also impacted by lower SG&A. Those increases were partially offset by increased marketing expense. Primarily in North America, we implemented new cash bonus programs and granted reduced stock compensation awards in 2016, as compared to prior years. As stock compensation is excluded from our measure of segment operating income, this shift to cash bonuses had an adverse impact on North America segment operating income of approximately \$21.5 million for the year ended December 31, 2016.
- The decrease in the EMEA segment operating income as compared to the prior year was primarily due to the decrease in gross profit in our EMEA segment described above, as well as an increase in marketing expense as compared to the year ended December 31, 2015. These decreases were partially offset by decreases in SG&A in our ongoing markets due to our cost reduction efforts and for countries we have exited as part of our restructuring plan and the disposition of our operations in Russia as described above.
- The increase in our Rest of World segment operating loss was due to a decrease in gross profit in our Rest of World segment partially offset by decreases in SG&A for countries we have exited as part of our restructuring plan and dispositions of our operations in India, Indonesia, and Malaysia as described above.

See Note 18, *Segment Information*, for a reconciliation of segment operating income (loss) information by reportable segment to consolidated net income (loss) for the year ended December 31, 2016 and 2015.

Comparison of the Years Ended December 31, 2015 and 2014 :

Income (loss) from operations for the year ended December 31, 2015 and 2014 was as follows:

	Year Ended December 31,			
	2015	2014	\$ Change	% Change
	(dollars in thousands)			
Income (loss) from operations	\$ (79,777)	\$ 30,701	\$ (110,478)	(359.9)%

The increase in our loss from operations was primarily attributable to the following:

- an \$80.2 million decrease in gross profit;
- a \$12.4 million increase in marketing expense; and
- a \$29.6 million increase in restructuring charges.

Those loss from operations for the year ended December 31, 2015 was partially offset by the following:

- a \$13.7 million gain on a business disposition; and
- a \$2.1 million favorable impact from year-over-year changes in foreign currency exchange rates.

Segment Operating Income

Segment operating income (loss) excludes stock-based compensation and acquisition-related expense (benefit), net. Segment operating income (loss) for the year ended December 31, 2015 and 2014 was as follows:

	Year Ended December 31,		
	2015	2014	\$ Change
	(in thousands)		
North America ⁽¹⁾	\$ 18,099	\$ 69,348	\$ (51,249)
EMEA ⁽¹⁾	70,094	104,068	(33,974)
Rest of World ⁽¹⁾	(24,379)	(26,156)	1,777

- (1) Segment cost of revenue and operating expenses and segment operating income (loss) exclude stock-based compensation and acquisition-related (benefit) expense, net. This presentation corresponds to the measure of segment profit or loss that our chief operating decision-maker uses in assessing segment performance and making resource allocation decisions. The following table summarizes the our stock-based compensation expense and acquisition-related expense (benefit), net by reportable segment for the year ended December 31, 2015 and 2014 (in thousands):

	Year Ended December 31,			
	2015		2014	
	Stock-based compensation	Acquisition-related	Stock-based compensation	Acquisition-related
North America	\$ 124,078	\$ 1,857	\$ 99,939	\$ 1,125
EMEA	11,445	—	9,927	144
Rest of World	6,546	—	5,424	—
Consolidated	\$ 142,069	\$ 1,857	\$ 115,290	\$ 1,269

- The decrease in our North America segment operating income was primarily attributable to an increase in segment operating expenses, which included a \$37.5 million increase in the litigation accrual related to our securities litigation matter, and increases in payroll and marketing expenses, partially offset by an increase in segment gross profit.
- The decrease in our EMEA segment operating income was attributable to a decrease in segment gross profit, partially offset by a decrease in segment operating expenses.
- The decrease in our Rest of World segment operating loss was attributable to a decrease in segment operating expenses, partially offset by a decrease in segment gross profit. See Note 18, *Segment Information*, for additional information.

Other Income (Expense), Net

Other income (expense), net includes interest income, interest expense, gains and losses on fair value option investments, impairments of investments and foreign currency gains and losses, primarily resulting from intercompany balances with our subsidiaries that are denominated in foreign currencies.

Comparison of the Years Ended December 31, 2016 and 2015 :

Other income (expense), net for the year ended December 31, 2016 and 2015 was as follows:

	Year Ended December 31,			
	2016	2015	\$ Change	% Change
	(dollars in thousands)			
Other income (expense), net	\$ (76,107)	\$ (28,539)	\$ (47,568)	(166.7)%

Other income (expense), net for the year ended December 31, 2016 included \$12.2 million in foreign currency losses, which primarily resulted from intercompany balances with our subsidiaries that are denominated in foreign currencies, \$15.7 million of interest expense and \$48.1 million of losses on fair value option investments. The net foreign currency losses included a \$5.7 million loss related to the cumulative translation adjustments that were reclassified to earnings for countries that we exited as part of our restructuring plan. Interest expense increased by \$12.7 million for the year ended December 31, 2016 as compared to the year ended December 31, 2015, due to our issuance of convertible notes in April 2016 (See Note 9, *Financing Arrangements*). We incurred losses on fair value option investments due to declines in the fair values of both Monster Holdings LP and Groupmax Pte Ltd. (See Note 7, *Investments*).

Other income (expense), net for the year ended December 31, 2015 was primarily comprised of \$23.8 million in net foreign currency transaction losses, which primarily resulted from intercompany balances with our subsidiaries that are denominated in foreign currencies. The net foreign currency transaction losses also included a \$4.4 million loss related to the cumulative translation adjustment for our legacy business in the Republic of Korea that was reclassified to earnings as a result of the disposition of all the outstanding equity interests of LivingSocial Korea, Inc., including its subsidiary Ticket Monster Inc. ("Ticket Monster") and a \$3.7 million net gain related to the cumulative translation adjustments that were reclassified to earnings for countries that we exited as part of our restructuring plan.

Comparison of the Years Ended December 31, 2015 and 2014 :

Other income (expense), net for the year ended December 31, 2015 and 2014 was as follows:

	Year Ended December 31,			
	2015	2014	\$ Change	% Change
	(dollars in thousands)			
Other income (expense), net	\$ (28,539)	\$ (33,450)	\$ 4,911	14.7%

Other income (expense), net for the year ended December 31, 2015 was primarily comprised of \$23.8 million in net foreign currency losses, which primarily resulted from intercompany balances with our subsidiaries that are denominated in foreign currencies. The net foreign currency losses also included a \$4.4 million loss related to the cumulative translation adjustment for our legacy business in the Republic of Korea that was reclassified to earnings as a result of the Ticket Monster disposition and a \$3.7 million net gain related to the cumulative translation adjustments that were reclassified to earnings for countries that we exited as part of our restructuring plan.

Other income (expense), net for the year ended December 31, 2014 was primarily comprised of \$2.0 million of other-than-temporary impairments related to minority investments and \$31.5 million of foreign currency losses.

Provision (Benefit) for Income Taxes**Comparison of the Years Ended December 31, 2016 and 2015 :**

Provision (benefit) for income taxes for the year ended December 31, 2016 and 2015 was as follows:

	Year Ended December 31,			
	2016	2015	\$ Change	% Change
	(dollars in thousands)			
Provision (benefit) for income taxes	\$ (2,547)	\$ (19,145)	\$ 16,598	86.7%
Effective tax rate	1.4%	17.7%		

The pretax losses incurred by our operations in jurisdictions that have valuation allowances against their net deferred tax assets, including the United States, was the primary factor impacting our effective tax rate for the year ended December 31, 2016. Significant factors impacting our effective tax rate for the year ended December 31, 2015 included pretax losses incurred by our operations in certain foreign jurisdictions that had valuation allowances against their net deferred tax assets and amortization of the tax effects of intercompany sales of intellectual property.

We are currently undergoing income tax audits in multiple jurisdictions. There are many factors, including factors outside of our control, that influence the progress and completion of these audits. We decreased our liabilities for uncertain tax positions and recognized income tax benefits of \$8.4 million and \$25.6 million for the years ended December 31, 2016 and 2015, respectively, as a result of new information that impacted our estimate of the amount that is more-likely-than not of being realized upon settlement of a tax position and due to expirations of applicable statutes of limitations. As of December 31, 2016, we believe that it is reasonably possible that additional changes of up to \$36.6 million in unrecognized tax benefits may occur within the next 12 months.

We expect that our consolidated effective tax rate in future periods will continue to differ significantly from the U.S. federal income tax rate as a result of our tax obligations in jurisdictions with profits and valuation allowances in jurisdictions with losses.

Comparison of the Years Ended December 31, 2015 and 2014 :

Provision (benefit) for income taxes for the years ended December 31, 2015 and 2014 was as follows:

	Year Ended December 31,			
	2015	2014	\$ Change	% Change
	(dollars in thousands)			
Provision (benefit) for income taxes	\$ (19,145)	\$ 15,724	\$ (34,869)	(221.8)%
Effective tax rate	17.7%	(572.0)%		

Significant factors impacting our effective tax rate for the year ended December 31, 2015 and 2014 included losses from continuing operations in jurisdictions that we are not able to benefit due to uncertainty as to the realization of those losses, amortization of the tax effects of intercompany sales of intellectual property, nondeductible stock-based compensation expense and decreases in our liabilities for uncertain tax positions. For the year ended December 31, 2015 our effective tax rate was also impacted by a \$26.0 million charge to income tax expense resulting from a valuation allowance increase in the United States.

We are currently subject to income tax audits in multiple jurisdictions. There are many factors, including factors outside of our control, which influence the progress and completion of these audits. We decreased our liabilities for uncertain tax positions and recognized income tax benefits of \$25.6 million for the year ended December 31, 2015, as a result of new information that impacted our estimate of the amount that is more-likely-than not of being realized upon settlement of a tax position and due to expirations of applicable statutes of limitations. For the year ended December 31, 2014, we decreased our liabilities for uncertain tax positions and recognized income tax benefits of \$28.7 million and \$24.4 million, respectively, as a result of new information that impacted our estimate of the amount that is more-likely-than not of being realized upon settlement of a tax position and due to expirations of applicable statutes of limitations.

Income (Loss) from Discontinued Operations

In May 2015, we sold a controlling stake in Ticket Monster and the results of that entity have been presented as discontinued operations for the year ended December 31, 2015 and 2014. See Note 3, *Discontinued Operations and Other Dispositions*, for additional information.

Non-GAAP Financial Measures

In addition to financial results reported in accordance with U.S. GAAP, we have provided the following non-GAAP financial measures: Adjusted EBITDA, free cash flow and foreign currency exchange rate neutral operating results. These non-GAAP financial measures, which are presented on a continuing operations basis, are intended to aid investors in better understanding our current financial performance and prospects for the future as seen through the eyes of management. We believe that these non-GAAP financial measures facilitate comparisons with our historical results and with the results of peer companies who present similar measures (although other companies may define non-GAAP measures differently than we define them, even when similar terms are used to identify such measures). However, these non-GAAP financial measures are not intended to be a substitute for those reported in accordance with U.S. GAAP.

Adjusted EBITDA. Adjusted EBITDA is a non-GAAP performance measure that we define as net income (loss) from continuing operations excluding income taxes, interest and other non-operating items, depreciation and amortization, stock-based compensation, acquisition-related expense (benefit), net and other special charges and credits, including items that are unusual in nature or infrequently occurring. Our definition of Adjusted EBITDA may differ from similar measures used by other companies, even when similar terms are used to identify such measures. Adjusted EBITDA is a key measure used by our management and Board of Directors to evaluate operating performance, generate future operating plans and make strategic decisions for the allocation of capital. Accordingly, we believe that Adjusted EBITDA provides useful information to investors and others in understanding and evaluating our operating results in the same manner as our management and Board of Directors.

We exclude stock-based compensation expense and depreciation and amortization because they are primarily non-cash in nature and we believe that non-GAAP financial measures excluding these items provide meaningful supplemental information about our operating performance and liquidity. Acquisition-related expense (benefit), net is comprised of the change in the fair value of contingent consideration arrangements and external transaction costs related to business combinations, primarily consisting of legal and advisory fees. The composition of our contingent consideration arrangements and the impact of those arrangements on our operating results vary over time based on a number of factors, including the terms of our business combinations and the timing of those transactions. For the years ended December 31, 2016 and 2015, special charges and credits included gains from business dispositions and charges related to our restructuring plan. For the year ended December 31, 2015, special charges and credits also included the write-off of a prepaid asset related to a marketing program that was discontinued because the counterparty ceased operations and the expense related to a significant increase in the contingent liability for our securities litigation matter. There were no special charges and credits included within operating income for the year ended December 31, 2014. We exclude special charges and credits from Adjusted EBITDA because we believe that excluding those items provides meaningful supplemental information about our core operating performance and facilitates comparisons with our historical results.

The following is a reconciliation of Adjusted EBITDA to the most comparable U.S. GAAP financial measure, "Income (loss) from continuing operations" for the years ended December 31, 2016, 2015 and 2014 (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Income (loss) from continuing operations	\$ (183,323)	\$ (89,171)	\$ (18,473)
Adjustments:			
Stock-based compensation ⁽¹⁾	112,638	141,734	115,290
Depreciation and amortization	137,668	132,970	115,041
Acquisition-related expense (benefit), net	5,650	1,857	1,269
Gains on business dispositions	(11,711)	(13,710)	—
Restructuring charges	43,608	29,568	—
Prepaid marketing write-off	—	6,690	—
Securities litigation expense	—	37,500	—
Other (income) expense, net	76,107	28,539	33,450
Provision (benefit) for income taxes	(2,547)	(19,145)	15,724
Total adjustments	361,413	346,003	280,774
Adjusted EBITDA	\$ 178,090	\$ 256,832	\$ 262,301

- (1) Represents stock-based compensation expense recorded within "Selling, general and administrative," "Cost of revenue," and "Marketing." "Restructuring charges" and "Other income (expense), net" include \$4.7 million and \$0.8 million of additional stock-based compensation for the year ended December 31, 2016, respectively. "Other (income) expense, net," includes \$0.3 million of additional stock-based compensation for the year ended December 31, 2015.

Free cash flow. Free cash flow is a non-GAAP financial measure that comprises net cash provided by operating activities from continuing operations less purchases of property and equipment and capitalized software from continuing operations. We use free cash flow to conduct and evaluate our business because, although it is similar to cash flow from continuing operations, we believe that it typically represents a more useful measure of cash flows because purchases of fixed assets, software developed for internal use and website development costs are necessary components of our ongoing operations. Due to the impact of seasonality on our cash flows, we also use trailing twelve months free cash flow to conduct and evaluate our business. Free cash flow is not intended to represent the total increase or decrease in our cash balance for the applicable period.

Free cash flow has limitations due to the fact that it does not represent the residual cash flow available for discretionary expenditures. For example, free cash flow does not include the cash payments for business acquisitions. In addition, free cash flow reflects the impact of the timing difference between when we are paid by customers and when we pay merchants and suppliers. Therefore, we believe it is important to view free cash flow as a complement to our entire consolidated statements of cash flows.

The following is a reconciliation of free cash flow to the most comparable U.S. GAAP financial measure, "Net cash provided by (used in) operating activities from continuing operations," for the years ended December 31, 2016, 2015 and 2014 (in thousands):

	Year Ended December 31,		
	2016	2015 ⁽¹⁾	2014 ⁽¹⁾
Net cash provided by (used in) operating activities from continuing operations	\$ 117,105	\$ 299,747	\$ 268,477
Purchases of property and equipment and capitalized software from continuing operations	(68,893)	(83,988)	(83,560)
Free cash flow	\$ 48,212	\$ 215,759	\$ 184,917
Net cash provided by (used in) investing activities from continuing operations	\$ (57,486)	\$ (177,250)	\$ (152,818)
Net cash provided by (used in) financing activities	\$ (14,665)	\$ (515,785)	\$ (210,136)

- (1) We adopted the guidance in ASU 2016-09 on January 1, 2016. ASU 2016-09 requires that all income tax-related cash flows resulting from share-based payments be reported as operating activities in the statement of cash flows. Previously, income tax benefits at settlement of an award were reported as a reduction to operating cash flows and an increase to financing cash flows to the extent that those benefits exceeded the income tax benefits reported in earnings during the award's vesting period. We elected to apply that change in cash flow classification on a retrospective basis, which has resulted in increases to net cash provided by operating activities, net cash used in financing activities and free cash flow of \$7.6 million and \$16.0 million for the years ended December 31, 2015 and 2014, respectively.

Foreign currency exchange rate neutral operating results. Foreign currency exchange rate neutral operating results show current period operating results as if foreign currency exchange rates had remained the same as those in effect in the prior year period. These measures are intended to facilitate comparisons to our historical performance. For a reconciliation of foreign currency exchange rate neutral operating results to the most comparable U.S. GAAP financial measures, see "Results of Operations" above.

Liquidity and Capital Resources

As of December 31, 2016, we had \$891.8 million in cash and cash equivalents, which primarily consisted of cash and government money market funds.

Since our inception, we have funded our working capital requirements primarily with cash flows provided by operations and through public and private sales of common and preferred stock, which have yielded net proceeds of approximately \$1,857.1 million. In connection with our third-party and direct revenue sales transactions, we collect cash from credit card payment processors shortly after a sale occurs and remit payment to merchants and inventory suppliers at a later date in accordance with the related contractual payment terms. We expect this favorable working capital cycle to continue for the foreseeable future. In April 2016, we issued 3.25% senior convertible notes due 2020 (the "Notes") with an aggregate principal amount of \$250.0 million. See Note 9, *Financing Arrangements*, for additional information.

Our merchant arrangements are structured as either a redemption payment model or a fixed payment model defined as follows:

Redemption payment model - We typically pay our merchants upon redemption for the majority of third-party offerings available through our online marketplaces in our EMEA and Rest of World segments. Under our redemption merchant payment model, we collect payments at the time customers purchase vouchers and make payments to merchants at a subsequent date. Using this payment model, merchants are not paid until the customer redeems the voucher that has been purchased. If a customer does not redeem the voucher under this payment model, we retain all of the gross billings from the unredeemed voucher. The redemption model generally improves our overall cash flow because we do not pay our merchants until the customer redeems the voucher.

Fixed payment model - We typically pay merchants under the fixed payment model for a majority of offerings available through our online marketplace in North America. Under the fixed payment model, merchants are paid regardless of whether the voucher is redeemed. For third-party revenue deals in which the merchant has a continuous presence on our websites and mobile applications by offering deals for an extended period of time, which currently represents a substantial majority of our third-party offerings in North America, we remit payments to the merchant on an ongoing basis, generally bi-weekly, throughout the term of the offering. For product offerings in our Goods category, payment terms with inventory suppliers across our three segments typically range from net 30 days to net 60 days.

We experience fluctuations in accrued merchant and supplier payables associated with our revenue-generating activities, including both third-party and direct revenue sales transactions, that can cause volatility in working capital levels and impact cash balances more or less than our operating income or loss would indicate. Revenue from our Goods category has grown in recent periods in absolute dollars. This category has lower margins than our Local category, primarily as a result of shipping and fulfillment costs on direct revenue transactions. As a result of those lower margins, the amount of cash that we ultimately retain from direct revenue transactions in our Goods category after paying the related inventory, shipping and fulfillment costs is less than the amount that we ultimately retain from third-party revenue transactions in our Local category after paying the merchant's share. However, the impact of transactions in our Goods category on our operating cash flows varies from period to period. For example, the cash flows from transactions in that category are impacted by seasonality, with strong cash inflows typically generated during the fourth quarter holiday season followed by subsequent cash outflows in the following period when payments are made to suppliers of the merchandise.

We generally use our cash flows to fund our operations, make acquisitions, purchase capital assets, purchase stock under our share repurchase program and meet our other cash operating needs. Cash flow provided by operations was \$117.1 million for the year ended December 31, 2016 and cash flow provided by operations, including discontinued operations, was \$262.5 million for the year ended December 31, 2015. We expect cash flows from operations to be positive in 2017.

We consider the undistributed earnings of our foreign subsidiaries as of December 31, 2016 to be indefinitely reinvested and, accordingly, no U.S. income taxes have been provided thereon. As of December 31, 2016, the amount of cash and cash equivalents held in foreign jurisdictions was approximately \$295.5 million. We have not, nor do we anticipate the need to, repatriate funds to the United States to satisfy domestic liquidity needs arising in the ordinary course of business.

In April 2016, we received net proceeds of \$243.2 million from the issuance of the Notes. We have used the proceeds from the Notes for general corporate purposes, including repurchases of shares of our Class A common stock. Additionally, we entered into note hedge and warrant transactions with certain bank counterparties that are designed to offset, in part, the potential dilution from conversion of the Notes. See Note 9, *Financing Arrangements*, for additional information.

In June 2016, we amended and restated our senior secured revolving credit agreement (the "Amended and Restated Credit Agreement") that provides for aggregate principal borrowings of up to \$250.0 million and matures in June 2019. The Amended and Restated Credit Agreement replaced our previous \$250.0 million credit agreement that was scheduled to mature in August 2017 (the "Original Credit Agreement"). As of December 31, 2016 and 2015, we had no borrowings under the Amended and Restated Credit Agreement or the Original Credit Agreement, respectively, and were in compliance with all covenants. See Note 9, *Financing Arrangements*, for additional information.

Although we can provide no assurances, we believe that our available cash and cash equivalents balance and cash generated from operations should be sufficient to meet our working capital requirements and other capital expenditures for at least the next twelve months.

Uses of Cash

We expect to continue to make significant investments in our technology platforms and business processes, as well as internal tools aimed at improving the efficiency of our operations. We will also continue to invest in sales and marketing as we seek to increase deal coverage, improve the quality of active deals and increase the volume of transactions through our marketplaces.

In April 2016, we deposited \$39.5 million in an escrow account in connection with the preliminary court approval of the settlement for our securities litigation matter (See Note 10, *Commitments and Contingencies*). The \$5.5 million remaining settlement amount for this matter was funded by our insurance carrier. Final court approval of the settlement was granted on July 13, 2016.

The Board has authorized us to repurchase up to \$700.0 million of our common stock through April 2018 under our share repurchase program. During the year ended December 31, 2016, we purchased 43,227,743 shares of our common stock for an aggregate purchase price of \$162.4 million (including fees and commissions) under the share repurchase program. As of December 31, 2016, up to \$195.0 million of our common stock remained available for purchase under that program. The timing and amount of any share repurchases are determined based on market conditions, share price and other factors, and the programs may be discontinued or suspended at any time. Repurchases will be made in compliance with SEC rules and other legal requirements and may be made, in part, under a Rule 10b5-1 plan, which permits share repurchases when the Company might otherwise be precluded from doing so.

We currently plan to use our cash and cash equivalents and cash flows generated from our operations to fund share repurchases, strategic investments, business acquisitions and other transactions and investments in technology and marketing. Additionally, we have the ability to borrow funds under the Amended and Restated Credit Agreement, as described above. We could also seek to raise additional financing, if available on terms that we believe are favorable, to increase the amount of liquid funds that we can access for share repurchases, future acquisitions or other strategic investment opportunities.

Cash Flow

Our net cash flows from operating, investing and financing activities for the years ended December 31, 2016, 2015 and 2014 were as follows:

	Year Ended December 31,		
	2016	2015 ⁽¹⁾	2014 ⁽¹⁾
	(in thousands)		
Cash provided by (used in):			
Operating activities from continuing operations	\$ 117,105	\$ 299,747	\$ 268,477
Operating activities from discontinued operations	—	(37,248)	36,327
Operating activities	117,105	262,499	304,804
Investing activities from continuing operations	(57,486)	(177,250)	(152,818)
Investing activities from discontinued operations	—	244,470	(76,638)
Investing activities	(57,486)	67,220	(229,456)
Financing activities	(14,665)	(515,785)	(210,136)
Effect of changes in exchange rates on cash and cash equivalents, including cash classified within current assets held for sale	(6,470)	(32,485)	(33,771)
Net increase (decrease) in cash and cash equivalents, including cash classified within current assets held for sale	38,484	(218,551)	(168,559)
Less: Net increase (decrease) in cash classified within current assets held for sale	—	(55,279)	55,279
Net increase (decrease) in cash and cash equivalents	\$ 38,484	\$ (163,272)	\$ (223,838)

- (1) We adopted the guidance in ASU 2016-09 on January 1, 2016. ASU 2016-09 requires that all income tax-related cash flows resulting from share-based payments be reported as operating activities in the statement of cash flows. Previously, income tax benefits at settlement of an award were reported as a reduction to operating cash flows and an increase to financing cash flows to the extent that those benefits exceeded the income tax benefits reported in earnings during the award's vesting period. We elected to apply that change in cash flow classification on a retrospective basis, which has resulted in increases to net cash provided by operating activities, net cash used in financing activities and free cash flow of \$7.6 million and \$16.0 million for the years ended December 31, 2015 and 2014, respectively.

Cash Provided by (Used in) Operating Activities

Cash provided by (used in) operating activities primarily consists of our net loss adjusted for certain items, including depreciation and amortization, stock-based compensation, restructuring charges, deferred income taxes and the effect of changes in working capital and other items.

For the year ended December 31, 2016, our net cash provided by operating activities from continuing operations was \$117.1 million, which resulted from a \$293.5 million net increase for certain non-cash items, primarily consisting of stock-based compensation, depreciation and amortization and changes in the fair value of investments, which were partially offset by a \$183.3 million net loss from continuing operations.

For the year ended December 31, 2015, our net cash provided by operating activities from continuing operations was \$299.7 million, which resulted from the following:

- a \$262.8 million net increase for certain non-cash items, primarily consisting of stock-based compensation and depreciation and amortization; and
- a \$126.1 million net increase related to changes in working capital and other assets and liabilities, primarily consisted of a \$40.2 million increase in accrued merchant and supplier payables, due to the timing of payments to suppliers of merchandise and the seasonally high levels of Goods transactions in the fourth quarter of 2015.

These items were partially offset by an \$89.2 million net loss from continuing operations.

For the year ended December 31, 2015, net cash provided by operating activities from discontinued operations was \$37.2 million, which primarily resulted from a \$156.0 million net decrease for certain non-cash items, partially offset by the \$122.9 million net loss from discontinued operations. Non-cash items primarily consisted of the pretax gain of \$202.2 million on the disposition of Ticket Monster, partially offset by \$34.2 million in deferred income taxes, \$6.3 million of amortization expense related to acquired intangible assets and \$5.3 million of stock-based compensation expense.

For the year ended December 31, 2014, our net cash provided by operating activities from continuing operations was \$268.5 million, which resulted from the following:

- a \$219.3 million net increase for certain non-cash items, primarily consisting of stock-based compensation and depreciation and amortization; and
- a \$67.7 million net increase related to changes in working capital and other assets and liabilities, primarily consisted of an \$54.9 million increase in accrued merchant and supplier payables due to the timing of payments to suppliers of merchandise and the seasonally high levels of Goods transactions in the fourth quarter of 2014.

These items were partially offset by an \$18.5 million net loss from continuing operations.

For the year ended December 31, 2014, net cash provided by operating activities from discontinued operations was \$36.3 million, which primarily resulted from a \$36.4 million increase for certain non-cash items and a \$45.3 million net increase related to changes in working capital, partially offset by the \$45.4 million net loss from discontinued operations.

Cash Provided by (Used in) Investing Activities

Cash flows provided by (used in) investing activities primarily consists of capital expenditures, acquisitions and dispositions of businesses and minority investments.

For the year ended December 31, 2016, our net cash used in investing activities from continuing operations of \$57.5 million primarily consisted of \$68.9 million in capital expenditures, including capitalized internally-developed software, partially offset by \$14.5 million in net cash acquired from business combinations.

For the year ended December 31, 2015, our net cash used in investing activities from continuing operations of \$177.3 million consisted of \$84.0 million in capital expenditures, including capitalized internally-developed software, \$69.9 million in net cash paid for acquisitions as described in Note 4, *Business Combinations*, and \$25.3 million in purchases of investments.

For the year ended December 31, 2015, our \$244.5 million of net cash used in investing activities from discontinued operations primarily consisted of cash proceeds received from the sale of a controlling stake in Ticket Monster, net of the cash from that business that was derecognized.

For the year ended December 31, 2014, our net cash used in investing activities from continuing operations of \$152.8 million primarily consisted of \$83.6 million in capital expenditures, including capitalized internally-developed software, and \$59.7 million in net cash paid for acquisitions as described in Note 4, *Business Combinations*.

For the year ended December 31, 2014, our \$76.6 million of net cash used in investing activities from discontinued operations primarily consisted of \$71.7 million in cash paid for Ticket Monster, net of cash acquired.

Cash Provided by (Used in) Financing Activities

Cash flows provided by (used in) financing activities primarily consists of proceeds from the issuance of convertible senior notes, payments for issuance costs related to the convertible senior notes and the amended and restated revolving credit agreement, payments for the purchase of convertible note hedges, proceeds from the issuance of warrants, payments for purchases of treasury stock, taxes paid related to net share settlements of stock-based compensation awards, proceeds from stock option exercises and our employee stock purchase plan, distributions to noncontrolling interest holders and payments of capital lease obligations.

For the year ended December 31, 2016, our net cash used in financing activities of \$14.7 million was driven by the following:

- proceeds from issuance of the Notes of \$250.0 million ;
- payments for the purchase of convertible note hedges of \$59.2 million ;
- proceeds from the issuance of warrants of \$35.5 million ;
- purchases of treasury stock under our share repurchase program of \$165.4 million ;
- taxes paid related to net share settlements of stock-based compensation awards of \$29.8 million ; and
- payments of capital lease obligations of \$30.6 million .

For the year ended December 31, 2015, our net cash used in financing activities of \$515.8 million was driven by the following:

- purchases of treasury stock under our share repurchase program of \$442.8 million ;
- taxes paid related to net share settlements of stock-based compensation awards of \$40.1 million ; and
- payments of capital lease obligations of \$24.4 million .

For the year ended December 31, 2014, our net cash used in financing activities of \$210.1 million was driven by the following:

- taxes paid related to net share settlements of stock-based compensation awards of \$43.6 million ; and
- \$153.3 million for purchases of treasury stock under our share repurchase program.

Free Cash Flow

Free cash flow, a non-GAAP financial measure that comprises net cash provided by operating activities from continuing operations less purchases of property and equipment and capitalized software from continuing operations. Free cash flow for the years ended December 31, 2016, 2015 and 2014 were as follows:

	Year Ended December 31,		
	2016	2015 ⁽¹⁾	2014 ⁽¹⁾
	(dollars in thousands)		
Free cash flow	\$ 48,212	\$ 215,759	\$ 184,917

- (1) We adopted the guidance in ASU 2016-09 on January 1, 2016. ASU 2016-09 requires that all income tax-related cash flows resulting from share-based payments be reported as operating activities in the statement of cash flows. Previously, income tax benefits at settlement of an award were reported as a reduction to operating cash flows and an increase to financing cash flows to the extent that those benefits exceeded the income tax benefits reported in earnings during the award's vesting period. We elected to apply that change in cash flow classification on a retrospective basis, which has resulted in increases to net cash provided by operating activities, net cash used in financing activities and free cash flow of \$7.6 million and \$16.0 million for the years ended December 31, 2015 and 2014, respectively.

The decrease in free cash flow for the year ended December 31, 2016, as compared to the year ended December 31, 2015, was primarily due to the \$182.6 million decrease in our operating cash flows from continuing operations.

The increase in free cash flow for the year ended December 31, 2015 , as compared to the year ended December 31, 2014 , was due to the \$31.3 million increase in our operating cash flows from continuing operations, partially offset by higher capital expenditures.

For further information and a reconciliation to the most applicable financial measure under U.S. GAAP, refer to our discussion under " *Non-GAAP Financial Measures* " above.

Contractual Obligations and Commitments

The following table summarizes our future contractual obligations and commitments as of December 31, 2016 . The table below excludes \$41.8 million of non-current liabilities for unrecognized tax benefits, including interest and penalties, as of December 31, 2016 . We cannot make a reasonable estimate of the period of cash settlement for the tax positions classified as non-current liabilities.

	Payments due by period						
	Total	2017	2018	2019	2020	2021	Thereafter
	(in thousands)						
Capital lease obligations ⁽¹⁾	\$ 49,772	\$ 29,982	\$ 16,011	\$ 3,779	\$ —	\$ —	\$ —
Operating lease obligations ⁽²⁾	228,106	48,693	39,535	27,651	23,900	20,234	68,093
Convertible senior notes ⁽³⁾	292,656	8,125	8,125	8,125	8,125	8,125	252,031
Purchase obligations ⁽⁴⁾	29,435	17,535	9,310	2,500	45	45	—
Total	<u>\$ 599,969</u>	<u>\$ 104,335</u>	<u>\$ 72,981</u>	<u>\$ 42,055</u>	<u>\$ 32,070</u>	<u>\$ 28,404</u>	<u>\$ 320,124</u>

- (1) Capital lease obligations include both principal and interest components of future minimum capital lease payments.
- (2) Operating lease obligations are primarily for office facilities and are noncancelable. Certain leases contain periodic rent escalation adjustments and renewal and expansion options. Operating lease obligations expire at various dates with the latest maturity in 2026.
- (3) Represents the principal amount and related interest on our convertible senior notes.
- (4) Purchase obligations primarily represent noncancelable contractual obligations related to information technology products and services.

Off-Balance Sheet Arrangements

We did not have any off-balance sheet arrangements as of December 31, 2016 .

Critical Accounting Policies and Estimates

Management's Discussion and Analysis of Financial Condition and Results of Operations is based upon our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. Our significant accounting policies are discussed in Note 2, *Summary of Significant Accounting Policies*, in the notes to the consolidated financial statements.

The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts and classifications of assets and liabilities, revenue and expenses, and related disclosure of contingent liabilities. Management bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

An accounting policy is deemed to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, and if different estimates that reasonably could have been used, or changes in the accounting estimates that are reasonably likely to occur periodically, could materially impact the consolidated financial statements. Management believes its critical accounting policies that reflect its more significant estimates and assumptions are policies related to revenue recognition, impairment assessments of goodwill and long-lived assets, income taxes and fair value option investments.

Revenue Recognition

Refer to Note 2, *Summary of Significant Accounting Policies*, for information about our revenue recognition accounting policies, including estimates of our refund liabilities.

Impairment Assessments of Goodwill and Long-Lived Assets

Refer to Note 2, *Summary of Significant Accounting Policies*, for information about our accounting policies relating to goodwill and impairment of long-lived assets. Additional information about those accounting policies and estimates is set forth in the following paragraphs.

When determining fair values in impairment tests, we use one of the following recognized valuation methods: the income approach (including discounted cash flows), the market approach and the cost approach. Our significant estimates in those fair value measurements include identifying business factors such as size, growth, profitability, risk and return on investment and assessing comparable revenue and earnings multiples. Further, when measuring fair value based on discounted cash flows, we make assumptions about risk-adjusted discount rates, rates of increase in revenue, cost of revenue, and operating expenses, weighted average cost of capital, rates of long-term growth, and income tax rates. Valuations are performed by management or third-party valuation specialists under management's supervision, where appropriate. We believe that the estimated fair values used in impairment tests are based on reasonable assumptions that marketplace participants would use. However, such assumptions are inherently uncertain and actual results could differ from those estimates.

Our six reporting units as of October 1, 2016 were North America, Southern EMEA, Northern EMEA, Central EMEA, Asia Pacific and Latin America. As of the October 1, 2016 testing date, liabilities exceeded assets for the Central EMEA reporting unit. For reporting units with a negative book value (i.e., excess of liabilities over assets), qualitative factors are evaluated to determine whether it is necessary to perform the second step of the goodwill impairment test. Based on that evaluation, which included consideration of the significant growth of the business and improvement in its operating performance since the underlying operations were acquired in May 2010, we determined that the likelihood of a goodwill impairment for the Central EMEA reporting unit did not reach the more-likely-than-not threshold specified in U.S. GAAP. Accordingly, we concluded that the goodwill relating to the Central EMEA reporting unit was not impaired as of October 1, 2016, and step two of the goodwill impairment test was not required to be performed. For all other reporting units, there was no impairment of goodwill because the fair values of those reporting units exceeded their carrying values.

Future changes in our assumptions or the interrelationship of the assumptions described above may negatively impact future valuations. In future measurements of fair value, adverse changes in assumptions could result in impairments of goodwill or long-lived assets that would require non-cash charges to the consolidated statements of operations and may have a material effect on our financial condition and operating results.

Income Taxes

Refer to Note 2, *Summary of Significant Accounting Policies*, and Note 14, *Income Taxes*, for information about our income tax accounting policies.

Fair Value Option Investments

Refer to Note 7, *Investments*, for information about the fair value measurements of our fair value option investments. Additional information about those fair value measurements is set forth in the following paragraphs.

Both Monster LP and GroupMax have been pursuing growth strategies in which they are spending significantly on marketing and offering customer incentives that frequently result in low or negative margins. Those strategies, which are consistent with the business plans contemplated at the time Monster LP and GroupMax received third-party investments in May 2015 and August 2015, respectively, have generated significant operating losses and negative cash flows as the entities build their respective active customer bases. If Monster LP or GroupMax seek additional financing in order to fund their growth strategies, such financing transactions may result in dilution of our ownership stakes and they may occur at lower valuations, which could significantly decrease the fair values of our investments in those entities. For example, in December 2016, Monster LP issued a new class of partnership units (Class A-1) to its controlling investor group and a new investor for total proceeds of \$65.0 million. The fair value of Monster LP implied by the terms of the \$65.0 million equity financing transaction in December 2016 was lower than its estimated fair value in previous periods, which resulted in a significant decrease in the fair value of our investment for the year ended December 31, 2016. Additionally, if Monster LP or GroupMax are unable to obtain any such financing, those entities could need to significantly reduce their spending and use of customer incentives in order to fund their operations. Such actions likely would result in reduced growth forecasts, which also could significantly decrease the fair values of our investments in those entities.

Estimating the fair values of our investments in Monster LP and GroupMax requires significant judgment regarding the assumptions that market participants would use in pricing those assets. As the fair value measurements involve significant unobservable inputs, such as cash flow projections and discount rates, they are classified as Level 3 within the fair value hierarchy. Future changes in judgment about the related fair value inputs, including changes that may result from any subsequent financing transactions undertaken by those investees, could result in significant increases or decreases in fair value that would be recognized in earnings.

Recently Issued Accounting Standards

For a description of recently issued accounting standards, please see Note 2, *Summary of Significant Accounting Policies*, to the consolidated financial statements included in Item 8 of this Annual Report on Form 10-K.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We have operations both within the United States and internationally, and we are exposed to market risks in the ordinary course of our business, including the effect of foreign currency fluctuations, interest rate changes and inflation. Information relating to quantitative and qualitative disclosures about these market risks is set forth below.

Foreign Currency Exchange Risk

We transact business in various foreign currencies other than the U.S. dollar, principally the Euro, British pound sterling, Japanese yen, Swiss Franc and Brazilian real, which exposes us to foreign currency risk. For the year ended December 31, 2016, we derived approximately 26.3% and 5.2% of our revenue from our EMEA and Rest of World segments, respectively. Revenue and related expenses generated from our international operations are generally denominated in the local currencies of the corresponding countries. The functional currencies of our subsidiaries that either operate or support these markets are generally the same as the corresponding local currencies. The results of operations of, and certain of our intercompany balances associated with, our international operations are exposed to foreign currency exchange rate fluctuations. Upon consolidation, as exchange rates vary, our revenue and other operating results may differ materially from expectations, and we may record significant gains or losses on the re-measurement of intercompany balances. The British pound sterling has declined significantly against the U.S. dollar following the U.K.'s non-binding "Brexit" referendum on June 23, 2016, whereby a majority of voters supported its withdrawal from the European Union. As a result of the decline in sterling, the gross billings and revenue from our U.K. operations have been and are expected to continue to be adversely impacted and the expenses from our U.K. operations have been and are expected to continue to be favorably impacted in future periods because our financial statements are reported in U.S. dollars.

We assess our foreign currency exchange risk based on hypothetical changes in rates utilizing a sensitivity analysis that measures the potential impact on working capital based on a 10% change (increase and decrease) in currency rates. We use a current market pricing model to assess the changes in the value of the U.S. dollar on foreign currency denominated monetary assets and liabilities. The primary assumption used in this model is a hypothetical 10% weakening or strengthening of the U.S. dollar against those currency exposures as of December 31, 2016 and 2015.

As of December 31, 2016, our net working capital deficit (defined as current assets less current liabilities) from subsidiaries that are subject to foreign currency translation risk was \$48.1 million. The potential increase in this working capital deficit from a hypothetical 10% adverse change in quoted foreign currency exchange rates would be \$4.8 million. This compares to a \$32.4 million working capital deficit subject to foreign currency exposure as of December 31, 2015, for which a 10% adverse change would have resulted in a potential increase in this working capital deficit of \$3.2 million.

Interest Rate Risk

Our cash and cash equivalents primarily consist of cash and government money market funds. Our exposure to market risk for changes in interest rates is limited because our cash and cash equivalents have a short-term maturity and are used primarily for working capital purposes. In April 2016, we issued convertible notes with an aggregate principal amount of \$250.0 million (see Note 9, Financing Arrangements). The convertible notes bear interest at a fixed rate, so we have no financial statement impact from changes in interest rates. However, changes in market interest rates impact the fair value of the convertible notes along with other variables such as our credit spreads and the market price and volatility of our common stock. In June 2016, we entered into the Amended and Restated Credit Agreement that provides for aggregate principal borrowings of up to \$250.0 million. The Amended and Restated Credit Agreement replaced our previous \$250.0 million credit agreement that was scheduled to expire in August 2017. As of December 31, 2016, there were no borrowings outstanding under the Amended and Restated Credit Agreement. Because our Amended and Restated Credit Agreement bears interest at a variable rate, we are exposed to market risk relating to changes in interest rates if we borrow under the Amended and Restated Credit Agreement. We also have \$48.6 million of capital lease obligations and \$10.0 million of investments in convertible debt securities issued by nonpublic entities that are classified as available-for-sale. We do not believe that the interest rate risk on the long-term capital lease obligations and investments is significant.

Impact of Inflation

We believe that our results of operations are not materially impacted by moderate changes in the inflation rate. Inflation and changing prices did not have a material effect on our business, financial condition or results of operations for the year ended December 31, 2016.

ITEM 8: FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Groupon, Inc.

We have audited the accompanying consolidated balance sheets of Groupon, Inc. as of December 31, 2016 and 2015 , and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2016 . Our audits also included the financial statement schedule listed in Item 15(2). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Groupon, Inc. at December 31, 2016 and 2015 , and the consolidated results of its operations, and its cash flows for each of the three years in the period ended December 31, 2016 , in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

As discussed in Note 2 to the consolidated financial statements, on January 1, 2016, the Company adopted the amendments to the FASB Accounting Standards Codification resulting from Accounting Standards Update No. 2016-09, "Compensation - Stock Compensation (Topic 718) - Improvements to Employee Share-Based Payment Accounting."

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Groupon, Inc.'s internal control over financial reporting as of December 31, 2016 , based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 15, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP
Chicago, Illinois
February 15, 2017

GROUPON, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)

	December 31,	
	2016	2015
Assets		
Current assets:		
Cash and cash equivalents	\$ 891,846	\$ 853,362
Accounts receivable, net	86,655	68,175
Prepaid expenses and other current assets	113,435	153,705
Total current assets	1,091,936	1,075,242
Property, equipment and software, net	171,006	198,897
Goodwill	283,962	287,332
Intangible assets, net	42,915	36,483
Investments (including \$110,066 and \$163,675 at December 31, 2016 and December 31, 2015, respectively, at fair value)	141,882	178,236
Deferred income taxes	5,231	3,454
Other non-current assets	24,445	16,620
Total Assets	\$ 1,761,377	\$ 1,796,264
Liabilities and Equity		
Current liabilities:		
Accounts payable	\$ 29,273	\$ 24,590
Accrued merchant and supplier payables	800,697	776,211
Accrued expenses and other current liabilities	383,081	402,724
Total current liabilities	1,213,051	1,203,525
Convertible senior notes, net	178,995	—
Deferred income taxes	4,215	8,612
Other non-current liabilities	100,054	113,540
Total Liabilities	1,496,315	1,325,677
Commitments and contingencies (see Note 10)		
Stockholders' Equity		
Class A common stock, par value \$0.0001 per share, no shares authorized, issued or outstanding at December 31, 2016 and 2,000,000,000 shares authorized, 717,387,446 shares issued and 588,919,281 shares outstanding at December 31, 2015	—	72
Class B common stock, par value \$0.0001 per share, no shares authorized, issued or outstanding at December 31, 2016 and 10,000,000 shares authorized, 2,399,976 shares issued and outstanding at December 31, 2015	—	—
Common stock, par value \$0.0001 per share, 2,010,000,000 shares authorized, 736,531,771 shares issued and 564,835,863 shares outstanding at December 31, 2016 and no shares issued or outstanding at December 31, 2015	74	—
Additional paid-in capital	2,112,728	1,964,453
Treasury stock, at cost, 171,695,908 shares at December 31, 2016 and 128,468,165 shares at December 31, 2015	(807,424)	(645,041)
Accumulated deficit	(1,099,010)	(901,292)
Accumulated other comprehensive income (loss)	58,052	51,206
Total Groupon, Inc. Stockholders' Equity	264,420	469,398
Noncontrolling interests	642	1,189
Total Equity	265,062	470,587
Total Liabilities and Equity	\$ 1,761,377	\$ 1,796,264

See Notes to Consolidated Financial Statements.

GROUPON, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share and per share amounts)

	Year Ended December 31,		
	2016	2015	2014
Revenue:			
Third-party and other	\$ 1,303,546	\$ 1,372,533	\$ 1,501,011
Direct	1,839,808	1,746,983	1,541,112
Total revenue	3,143,354	3,119,516	3,042,123
Cost of revenue:			
Third-party and other	171,728	188,932	203,058
Direct	1,614,723	1,545,519	1,373,756
Total cost of revenue	1,786,451	1,734,451	1,576,814
Gross profit	1,356,903	1,385,065	1,465,309
Operating expenses:			
Marketing	362,951	254,335	241,954
Selling, general and administrative	1,066,168	1,192,792	1,191,385
Restructuring charges	43,608	29,568	—
Gains on business dispositions	(11,711)	(13,710)	—
Acquisition-related expense (benefit), net	5,650	1,857	1,269
Total operating expenses	1,466,666	1,464,842	1,434,608
Income (loss) from operations	(109,763)	(79,777)	30,701
Other income (expense), net	(76,107)	(28,539)	(33,450)
Income (loss) from continuing operations before provision (benefit) for income taxes	(185,870)	(108,316)	(2,749)
Provision (benefit) for income taxes	(2,547)	(19,145)	15,724
Income (loss) from continuing operations	(183,323)	(89,171)	(18,473)
Income (loss) from discontinued operations, net of tax	—	122,850	(45,446)
Net income (loss)	(183,323)	33,679	(63,919)
Net income attributable to noncontrolling interests	(11,264)	(13,011)	(9,171)
Net income (loss) attributable to Groupon, Inc.	\$ (194,587)	\$ 20,668	\$ (73,090)
Basic and diluted net income (loss) per share ⁽¹⁾:			
Continuing operations	\$ (0.34)	\$ (0.16)	\$ (0.04)
Discontinued operations	—	0.19	(0.07)
Basic and diluted net income (loss) per share	\$ (0.34)	\$ 0.03	\$ (0.11)
Weighted average number of shares outstanding ⁽¹⁾			
Basic	576,354,258	650,106,225	674,832,393
Diluted	576,354,258	650,106,225	674,832,393

(1) The structure of the Company's common stock changed during the year ended December 31, 2016. Refer to Note 11, *Stockholders' Equity*, and Note 17, *Income (Loss) per Share*, for additional information.

See Notes to Consolidated Financial Statements.

GROUPON, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in thousands)

	Year Ended December 31,		
	2016	2015	2014
Income (loss) from continuing operations	\$ (183,323)	\$ (89,171)	\$ (18,473)
Other comprehensive income (loss) from continuing operations:			
Foreign currency translation adjustments:			
Net unrealized gain (loss) during the period	6,579	7,725	19,589
Reclassification adjustments included in income (loss) from continuing operations	(591)	(192)	—
Net change in unrealized gain (loss)	5,988	7,533	19,589
Defined benefit pension plan adjustment:			
Pension liability adjustment	830	(113)	(1,500)
Amortization of pension net actuarial loss (gain) to earnings	98	100	—
Net change in unrealized gain (loss) (net of tax effect of \$176, \$3 and \$285 for the years ended December 31, 2016, 2015 and 2014, respectively)	928	(13)	(1,500)
Available-for-sale securities:			
Net unrealized gain (loss) during the period	(70)	(41)	(210)
Reclassification adjustment for impairment included in net income (loss) from continuing operations	—	—	831
Net change in unrealized gain (loss) on available-for-sale securities (net of tax effect of \$43, \$25 and \$383 for the years ended December 31, 2016, 2015 and 2014, respectively)	(70)	(41)	621
Other comprehensive income (loss) from continuing operations	6,846	7,479	18,710
Comprehensive income (loss) from continuing operations	(176,477)	(81,692)	237
Income (loss) from discontinued operations	—	122,850	(45,446)
Other comprehensive income (loss) from discontinued operations - Foreign currency translation adjustments:			
Net unrealized gain (loss) during the period	—	(4,349)	(7,964)
Reclassification adjustment included in net income (loss) from discontinued operations	—	12,313	—
Net change in unrealized gain (loss)	—	7,964	(7,964)
Comprehensive income (loss) from discontinued operations	—	130,814	(53,410)
Comprehensive income (loss)	(176,477)	49,122	(53,173)
Comprehensive income attributable to noncontrolling interests	(11,264)	(13,011)	(8,984)
Comprehensive income (loss) attributable to Groupon, Inc.	\$ (187,741)	\$ 36,111	\$ (62,157)

See Notes to Consolidated Financial Statements.

GROUPON, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share amounts)

	Groupon, Inc. Stockholders' Equity									
	Common Stock (1)		Additional Paid-In Capital	Treasury Stock		Accumulated Deficit	Accumulated Other Comprehensive Income	Total Groupon Inc. Stockholders' Equity	Non- controlling Interests	Total Equity
	Shares	Amount		Shares	Amount					
Balance at December 31, 2013	672,549,952	\$ 67	\$ 1,584,211	(4,432,800)	\$ (46,587)	\$ (848,870)	\$ 24,830	\$ 713,651	\$ (1,969)	\$ 711,682
Net income (loss)	—	—	—	—	—	(73,090)	—	(73,090)	9,171	(63,919)
Foreign currency translation	—	—	—	—	—	—	11,812	11,812	(187)	11,625
Pension liability adjustment, net of tax	—	—	—	—	—	—	(1,500)	(1,500)	—	(1,500)
Unrealized gain (loss) on available-for-sale securities, net of tax	—	—	—	—	—	—	621	621	—	621
Common stock issued in connection with acquisitions of businesses, net of issuance costs	15,255,180	2	173,813	—	—	—	—	173,815	—	173,815
Shares issued to settle liability-classified awards and contingent consideration	102,180	—	1,041	—	—	—	—	1,041	—	1,041
Purchase of interests in consolidated subsidiaries	—	—	(6,310)	—	—	—	—	(6,310)	2,415	(3,895)
Exercise of stock options	1,029,471	—	1,118	—	—	—	—	1,118	—	1,118
Vesting of restricted stock units	17,323,096	1	(1)	—	—	—	—	—	—	—
Shares issued under employee stock purchase plan	857,171	—	5,396	—	—	—	—	5,396	—	5,396
Tax withholdings related to net share settlements of stock-based compensation awards	(5,708,990)	—	(44,509)	—	—	—	—	(44,509)	—	(44,509)
Stock-based compensation on equity-classified awards	—	—	133,230	—	—	—	—	133,230	—	133,230
Tax shortfalls, net of excess tax benefits, on stock-based compensation awards	—	—	(569)	—	—	—	—	(569)	—	(569)
Purchases of treasury stock	—	—	—	(22,806,304)	(151,880)	—	—	(151,880)	—	(151,880)
Distributions to noncontrolling interest holders	—	—	—	—	—	—	—	—	(7,312)	(7,312)
Balance at December 31, 2014	701,408,060	\$ 70	\$ 1,847,420	(27,239,104)	\$ (198,467)	\$ (921,960)	\$ 35,763	\$ 762,826	\$ 2,118	\$ 764,944
Net income (loss)	—	—	—	—	—	20,668	—	20,668	13,011	33,679
Foreign currency translation	—	—	—	—	—	—	15,497	15,497	—	15,497
Pension liability adjustment, net of tax	—	—	—	—	—	—	(13)	(13)	—	(13)
Unrealized gain (loss) on available-for-sale securities, net of tax	—	—	—	—	—	—	(41)	(41)	—	(41)
Issuance of unvested restricted stock	2,203,861	—	—	—	—	—	—	—	—	—
Exercise of stock options	673,608	—	951	—	—	—	—	951	—	951
Vesting of restricted stock units	21,306,534	3	(3)	—	—	—	—	—	—	—
Shares issued under employee stock purchase plan	1,037,198	—	4,857	—	—	—	—	4,857	—	4,857
Tax withholdings related to net share settlements of stock-based compensation awards	(6,841,839)	(1)	(40,818)	—	—	—	—	(40,819)	—	(40,819)
Stock-based compensation on equity-classified awards	—	—	156,386	—	—	—	—	156,386	—	156,386
Tax shortfalls, net of excess tax benefits, on stock-based compensation awards	—	—	(4,340)	—	—	—	—	(4,340)	—	(4,340)

Purchases of treasury stock	—	—	—	(101,229,061)	(446,574)	—	—	(446,574)	—	(446,574)
Distributions to noncontrolling interest holders	—	—	—	—	—	—	—	—	(13,940)	(13,940)
Balance at December 31, 2015	719,787,422	\$ 72	\$ 1,964,453	(128,468,165)	\$ (645,041)	\$ (901,292)	\$ 51,206	\$ 469,398	\$ 1,189	\$ 470,587
Cumulative effect of change in accounting principle	—	—	—	—	—	(3,131)	—	(3,131)	—	(3,131)
Net income (loss)	—	—	—	—	—	(194,587)	—	(194,587)	11,264	(183,323)
Foreign currency translation	—	—	—	—	—	—	5,988	5,988	—	5,988
Pension liability adjustment, net of tax	—	—	—	—	—	—	928	928	—	928
Unrealized gain (loss) on available-for-sale securities, net of tax	—	—	—	—	—	—	(70)	(70)	—	(70)
Forfeitures of unvested restricted stock	(196,968)	—	—	—	—	—	—	—	—	—
Exercise of stock options	491,483	—	620	—	—	—	—	620	—	620
Vesting of restricted stock units	22,698,324	3	(3)	—	—	—	—	—	—	—
Shares issued under employee stock purchase plan	1,669,782	—	4,358	—	—	—	—	4,358	—	4,358
Tax withholdings related to net share settlements of stock-based compensation awards	(7,918,272)	(1)	(31,160)	—	—	—	—	(31,161)	—	(31,161)
Stock-based compensation on equity-classified awards	—	—	131,114	—	—	—	—	131,114	—	131,114
Equity component of the convertible senior notes, net of tax and issuance costs	—	—	67,014	—	—	—	—	67,014	—	67,014
Purchase of convertible note hedges	—	—	(59,163)	—	—	—	—	(59,163)	—	(59,163)
Issuance of warrants	—	—	35,495	—	—	—	—	35,495	—	35,495
Purchases of treasury stock	—	—	—	(43,227,743)	(162,383)	—	—	(162,383)	—	(162,383)
Distributions to noncontrolling interest holders	—	—	—	—	—	—	—	—	(11,811)	(11,811)
Balance at December 31, 2016	736,531,771	\$ 74	\$ 2,112,728	(171,695,908)	\$ (807,424)	\$ (1,099,010)	\$ 58,052	\$ 264,420	\$ 642	\$ 265,062

(1) The structure of the Company's common stock changed during the year ended December 31, 2016. Refer to Note 11, *Stockholders' Equity*, and Note 17, *Income (Loss) per Share*, for additional information.

See Notes to Consolidated Financial Statements.

GROUPON, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,		
	2016	2015	2014
Operating activities			
Net income (loss)	\$ (183,323)	\$ 33,679	\$ (63,919)
Less: Income (loss) from discontinued operations, net of tax	—	122,850	(45,446)
Income (loss) from continuing operations	(183,323)	(89,171)	(18,473)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization of property, equipment and software	118,720	113,048	94,145
Amortization of acquired intangible assets	18,948	19,922	20,896
Stock-based compensation	118,152	142,069	115,290
Restructuring-related long-lived asset impairments	421	7,267	—
Gains on business dispositions	(11,711)	(13,710)	—
Deferred income taxes	(10,621)	(8,985)	(11,124)
Loss on equity method investments	—	—	459
(Gain) loss, net from changes in fair value of contingent consideration	4,092	240	(2,444)
(Gain) loss from changes in fair value of investments	48,141	2,943	—
Impairments of investments	—	—	2,036
Amortization of debt discount on convertible senior notes	7,376	—	—
Change in assets and liabilities, net of acquisitions:			
Restricted cash	(1,327)	4,630	7,195
Accounts receivable	(14,563)	13,313	(16,277)
Prepaid expenses and other current assets	40,808	21,545	13,933
Accounts payable	3,214	8,601	(14,046)
Accrued merchant and supplier payables	18,445	40,217	54,921
Accrued expenses and other current liabilities	(34,512)	56,040	(9,986)
Other, net	(5,155)	(18,222)	31,952
Net cash provided by (used in) operating activities from continuing operations	117,105	299,747	268,477
Net cash provided by (used in) operating activities from discontinued operations	—	(37,248)	36,327
Net cash provided by (used in) operating activities	117,105	262,499	304,804
Investing activities			
Purchases of property and equipment and capitalized software	(68,893)	(83,988)	(83,560)
Cash derecognized upon dispositions of subsidiaries	(2,422)	(1,404)	—
Acquisitions of businesses, net of acquired cash	14,539	(69,888)	(59,735)
Purchases of investments	—	(25,289)	(6,726)
Proceeds from sale or maturity of investments	1,685	6,010	—
Acquisitions of intangible assets and other investing activities	(2,395)	(2,691)	(2,797)
Net cash provided by (used in) investing activities from continuing operations	(57,486)	(177,250)	(152,818)
Net cash provided by (used in) investing activities from discontinued operations	—	244,470	(76,638)
Net cash provided by (used in) investing activities	(57,486)	67,220	(229,456)
Financing activities			
Proceeds from borrowings under revolving credit facility	—	195,000	—
Repayments of borrowings under revolving credit facility	—	(195,000)	—
Proceeds from issuance of convertible senior notes	250,000	—	—
Issuance costs for convertible senior notes and revolving credit agreement	(8,147)	—	(1,029)
Purchase of convertible note hedges	(59,163)	—	—
Proceeds from issuance of warrants	35,495	—	—
Payments for purchases of treasury stock	(165,357)	(442,767)	(153,253)
Taxes paid related to net share settlements of stock-based compensation awards	(29,777)	(40,101)	(43,618)
Common stock issuance costs in connection with acquisition of business	—	—	(158)
Settlements of purchase price obligations related to acquisitions	—	—	(3,136)
Proceeds from stock option exercises and employee stock purchase plan	4,978	5,808	6,514
Distributions to noncontrolling interest holders	(11,811)	(13,940)	(8,034)
Payments of contingent consideration from acquisitions	(285)	(382)	—
Payments of capital lease obligations	(30,598)	(24,403)	(7,422)
Net cash provided by (used in) financing activities	(14,665)	(515,785)	(210,136)

Effect of exchange rate changes on cash and cash equivalents, including cash classified within current assets held for sale	(6,470)	(32,485)	(33,771)
Net increase (decrease) in cash and cash equivalents, including cash classified within current assets held for sale	38,484	(218,551)	(168,559)
Less: Net increase (decrease) in cash classified within current assets held for sale	—	(55,279)	55,279
Net increase (decrease) in cash and cash equivalents	38,484	(163,272)	(223,838)
Cash and cash equivalents, beginning of period	853,362	1,016,634	1,240,472
Cash and cash equivalents, end of period	<u>\$ 891,846</u>	<u>\$ 853,362</u>	<u>\$ 1,016,634</u>

Supplemental disclosure of cash flow information

Income tax payments (refunds) for continuing operations	\$ (4,255)	\$ (3,596)	\$ 24,006
Income tax payments for discontinued operations	—	13,870	—
Non-cash investing and financing activities			
Continuing operations:			
Equipment acquired under capital lease obligations	21,611	44,539	36,574
Leasehold improvements funded by lessor	4,990	6,711	—
Issuance of common stock in connection with acquisition of business	—	—	11,110
Liability for purchases of treasury stock	1,207	4,181	374
Contingent consideration liabilities incurred in connection with acquisitions	—	9,605	4,388
Accounts payable and accrued expenses related to purchases of property and equipment and capitalized software	3,867	2,457	1,923
Liability for purchase of additional interest in consolidated subsidiaries	526	526	1,598
Minority investment recognized in connection with disposition of Ticket Monster	—	122,075	—
Minority investment recognized in connection with disposition of Groupon India	—	16,400	—
Cost method investments acquired in connection with business dispositions	13,507	—	—
Discontinued operations:			
Issuance of common stock in connection with acquisition of Ticket Monster	—	—	162,862
Accounts payable and accrued expenses related to purchases of property and equipment and capitalized software	—	—	186

See Notes to Consolidated Financial Statements.

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. DESCRIPTION OF BUSINESS AND BASIS OF PRESENTATION

Company Information

Groupon, Inc. and subsidiaries (the "Company"), which commenced operations in October 2008, operates online local commerce marketplaces throughout the world that connect merchants to consumers by offering goods and services, generally at a discount. Customers access those marketplaces through the Company's websites, primarily localized groupon.com sites in many countries, and its mobile applications.

The Company's operations are organized into three segments: North America, EMEA, which is comprised of Europe, Middle East and Africa, and the remainder of the Company's international operations ("Rest of World"). See Note 18, *Segment Information*.

In May 2015, the Company sold a controlling stake in its subsidiary Ticket Monster, Inc. ("Ticket Monster"), an entity based in the Republic of Korea, that resulted in its deconsolidation. The financial results of Ticket Monster, including the gain on disposition and related income tax effects, are presented as discontinued operations in the accompanying consolidated financial statements for the years ended December 31, 2015 and 2014. See Note 3, *Discontinued Operations and Other Dispositions*, for additional information.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. The Company's consolidated financial statements were prepared in accordance with U.S. GAAP and include the assets, liabilities, revenue and expenses of all wholly-owned subsidiaries and majority-owned subsidiaries over which the Company exercises control and variable interest entities for which the Company has determined that it is the primary beneficiary. Outside stockholders' interests in subsidiaries are shown on the consolidated financial statements as "Noncontrolling interests." Equity investments in entities in which the Company does not have a controlling financial interest are accounted for under the equity method, the cost method, the fair value option or as available-for-sale securities, as appropriate.

Adoption of New Accounting Standards

The Company adopted the guidance in Accounting Standards Update ("ASU") 2014-15, *Presentation of Financial Statements - Going Concern (Subtopic 205-40) - Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*, as of December 31, 2016. This ASU requires management to assess a company's ability to continue as a going concern and to provide related disclosures in certain circumstances. Based on the results of the Company's analysis, no additional disclosures were required.

The Company adopted the guidance in ASU 2016-09, *Compensation - Stock Compensation (Topic 718) - Improvements to Employee Share-Based Payment Accounting*, on January 1, 2016. Under this ASU, entities are permitted to make an accounting policy election to either estimate forfeitures on share-based payment awards, as previously required, or to recognize forfeitures as they occur. The Company has elected to recognize forfeitures as they occur and the impact of that change in accounting policy has been recorded as a \$3.1 million cumulative effect adjustment to increase its accumulated deficit as of January 1, 2016. Additionally, ASU 2016-09 requires that all income tax effects related to settlements of share-based payment awards be reported in earnings as an increase or decrease to income tax expense (benefit), net. Previously, income tax benefits at settlement of an award were reported as an increase (or decrease) to additional paid-in capital to the extent that those benefits were greater than (or less than) the income tax benefits reported in earnings during the award's vesting period. The requirement to report those income tax effects in earnings has been applied on a prospective basis to settlements occurring on or after January 1, 2016 and the impact of applying that guidance was not material to the consolidated financial statements for the year ended December 31, 2016. ASU 2016-09 also requires that all income tax-related cash flows resulting from share-based payments be reported as operating activities in the statement of cash flows. Previously, income tax benefits at settlement of an award were reported as a reduction to operating

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

cash flows and an increase to financing cash flows to the extent that those benefits exceeded the income tax benefits reported in earnings during the award's vesting period. The Company has elected to apply that change in cash flow classification on a retrospective basis, which has resulted in increases of \$7.6 million and \$16.0 million to net cash provided by operating activities and a corresponding increase to net cash used in financing activities in the accompanying consolidated statement of cash flows for the years ended December 31, 2015 and 2014, respectively, as compared to the amounts previously reported. The remaining provisions of ASU 2016-09 did not have a material impact on the accompanying consolidated financial statements.

The Company adopted the guidance in ASU 2015-02, *Consolidation (Topic 810) - Amendments to the Consolidation Analysis*, on January 1, 2016. This ASU expands the variable interest entity ("VIE") criteria to specifically include limited partnerships in certain circumstances. The adoption of ASU 2015-02 did not have a material impact on the accompanying consolidated financial statements. The Company determined that Monster Holdings LP ("Monster LP") is not a VIE under ASU 2015-02, which is consistent with its conclusion prior to adoption of the ASU. That investment is evaluated as a corporation, rather than a limited partnership, for purposes of making consolidation determinations because its governance structure is akin to a corporation. Under the terms of Monster LP's amended and restated agreement of limited partnership, all of the objectives and purposes of Monster LP are carried out by a board of directors, rather than a general partner.

Reclassifications

Certain reclassifications have been made to the consolidated financial statements of prior periods and the accompanying notes to conform to the current period presentation.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires estimates and assumptions that affect the reported amounts and classifications of assets and liabilities, revenue and expenses, and the related disclosures of contingent liabilities in the consolidated financial statements and accompanying notes. Estimates are utilized for, but not limited to, stock-based compensation, income taxes, valuation of acquired goodwill and intangible assets, investments, customer refunds, contingent liabilities and the useful lives of property, equipment and software and intangible assets. Actual results could differ materially from those estimates.

Cash and Cash Equivalents

The Company considers all highly-liquid investments with an original maturity of three months or less from the date of purchase to be cash equivalents.

Accounts Receivable, Net

Accounts receivable primarily represents the net cash due from the Company's credit card and other payment processors for cleared transactions. The carrying amount of the Company's receivables is reduced by an allowance for doubtful accounts that reflects management's best estimate of amounts that will not be collected. The allowance is based on historical loss experience and any specific risks identified in collection matters. Accounts receivable are charged off against the allowance for doubtful accounts when it is determined that the receivable is uncollectible.

Inventories

Inventories, consisting of merchandise purchased for resale, are accounted for using the first-in, first-out ("FIFO") method of accounting and are valued at the lower of cost or market value. The Company writes down its inventory to the lower of cost or market value based upon assumptions about future demand and market conditions. If actual market conditions are less favorable than those projected by the Company, additional inventory write-downs may be required. Once established, the original cost of the inventory less the related inventory write-down represents a new cost basis.

Restricted Cash

Restricted cash primarily represents amounts that the Company is unable to access for operational purposes pursuant to contractual arrangements with certain financial institutions. The Company had \$5.8 million and \$6.2 million of restricted cash recorded within "Prepaid expenses and other current assets" and "Other non-currents assets," respectively, as of December 31,

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2016 . The Company had \$4.7 million and \$6.2 million of restricted cash recorded within "Prepaid expenses and other current assets" and "Other non-currents assets," respectively, as of December 31, 2015 .

Property and Equipment

Property and equipment are stated at cost and assets under capital leases are stated at the present value of minimum lease payments. Depreciation and amortization of property and equipment is recorded on a straight-line basis over the estimated useful lives of the assets. Generally, the useful lives are three years for computer hardware and office equipment, five to ten years for furniture and fixtures and warehouse equipment and the shorter of the term of the lease or the asset's useful life for leasehold improvements and assets under capital leases.

Internal-Use Software

The Company incurs costs related to internal-use software and website development, including purchased software and internally-developed software. Costs incurred in the planning and evaluation stage of internally-developed software and website development are expensed as incurred. Costs incurred and accumulated during the application development stage are capitalized and included within "Property, equipment and software, net" on the consolidated balance sheets. Amortization of internal-use software is recorded on a straight-line basis over the estimated useful lives of the assets of two years.

Impairment of Long-Lived Assets

Long-lived assets, such as property, equipment and software and intangible assets, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. If circumstances require that a long-lived asset or asset group to be held and used be tested for possible impairment, the Company first compares the undiscounted cash flows expected to be generated by that long-lived asset or asset group to its carrying amount. If the carrying amount of the long-lived asset or asset group is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying amount exceeds its fair value.

Long-lived assets or disposal groups classified as held for sale are recorded at the lower of their carrying amount or fair value less estimated selling costs. Long-lived assets are not depreciated or amortized while classified as held for sale.

Goodwill

Goodwill is allocated to the Company's reporting units at the date the goodwill is initially recorded. Once goodwill has been allocated to the reporting units, it no longer retains its identification with a particular acquisition and becomes identified with the reporting unit in its entirety. Accordingly, the fair value of the reporting unit as a whole is available to support the recoverability of its goodwill.

The Company evaluates goodwill for impairment annually on October 1 or more frequently when an event occurs or circumstances change that indicates the carrying value may not be recoverable. The Company has the option to assess goodwill for impairment by first performing a qualitative assessment to determine whether it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount. If the Company determines that it is not more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, then the two-step goodwill impairment test is not required to be performed. If the Company determines that it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, or if the Company does not elect the option to perform an initial qualitative assessment, the Company performs the two-step goodwill impairment test. In the first step, the fair value of the reporting unit is compared to its book value including goodwill. If the fair value of the reporting unit is in excess of its book value, the related goodwill is not impaired and no further analysis is necessary. If the fair value of the reporting unit is less than its book value, there is an indication of potential impairment and a second step is performed. When required, the second step of testing involves calculating the implied fair value of goodwill for the reporting unit. The implied fair value of goodwill is determined in the same manner as goodwill recognized in a business combination, which is the excess of the fair value of the reporting unit determined in step one over the fair value of its net assets, including identifiable intangible assets, as if the reporting unit had been acquired. If the carrying value of the reporting unit's goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized in an amount equal to that excess. For reporting units with a negative book value (i.e., excess of liabilities over assets), the Company evaluates qualitative factors to determine whether it is necessary to perform the second step of the goodwill impairment test.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Investments

Investments in nonmarketable equity shares with no redemption provisions that are not common stock or in-substance common stock or for which the Company does not have the ability to exercise significant influence are accounted for using the cost method of accounting and are classified within "Investments" on the consolidated balance sheets. Under the cost method of accounting, investments are carried at cost and are adjusted only for other-than-temporary declines in fair value, certain distributions and additional investments.

Investments in common stock or in-substance common stock for which the Company has the ability to exercise significant influence are accounted for under the equity method, except where the Company has made an irrevocable election to account for the investments at fair value. These investments are classified within "Investments" on the consolidated balance sheets. The Company's proportionate share of income or loss on equity method investments and changes in the fair values of investments for which the fair value option has been elected are presented within "Other income (expense), net" on the consolidated statements of operations.

Investments in convertible debt securities and convertible redeemable preferred shares are accounted for as available-for-sale securities, which are classified within "Investments" on the consolidated balance sheets. Available-for-sale securities are recorded at fair value each reporting period. Unrealized gains and losses, net of the related tax effects, are excluded from earnings and recorded as a separate component within "Accumulated other comprehensive income (loss)" on the consolidated balance sheets until realized. Interest income from available-for-sale securities is reported within "Other income (expense), net" on the consolidated statements of operations.

Other-than-Temporary Impairment of Investments

An unrealized loss exists when the current fair value of an investment is less than its cost basis. The Company conducts reviews of its investments with unrealized losses on a quarterly basis to evaluate whether those impairments are other-than-temporary. This evaluation, which is performed at the individual investment level, considers qualitative and quantitative factors regarding the severity and duration of the unrealized loss, as well as the Company's intent and ability to hold the investment for a period of time that is sufficient to allow for an anticipated recovery in value. Evidence considered in this evaluation includes the amount of the impairment, the length of time that the investment has been impaired, the factors contributing to the impairment, the financial condition and near-term prospects of the investee, recent operating trends and forecasted performance of the investee, market conditions in the geographic area or industry in which the investee operates and the Company's strategic plans for holding the investment in relation to the period of time expected for an anticipated recovery in value. Additionally, the Company considers whether it intends to sell the investment or whether it is more likely than not that it will be required to sell the investment before recovery of its amortized cost basis. Investments with unrealized losses that are determined to be other-than-temporary are written down to fair value with a charge to earnings. Unrealized losses that are determined to be temporary in nature are not recorded for cost method investments and equity method investments, while such losses are recorded, net of tax, in accumulated other comprehensive income (loss) for available-for-sale securities.

Income Taxes

The Company accounts for income taxes using the asset and liability method, under which deferred income tax assets and liabilities are recognized based upon anticipated future tax consequences attributable to differences between the financial statement carrying amounts of assets and liabilities and their respective tax bases. The Company regularly reviews deferred tax assets to assess whether it is more-likely-than-not that the deferred tax assets will be realized and, if necessary, establish a valuation allowance for portions of such assets to reduce the carrying value.

For purposes of assessing whether it is more-likely-than-not that deferred tax assets will be realized, the Company considers the following four sources of taxable income for each tax jurisdiction: (a) future reversals of existing taxable temporary differences, (b) projected future earnings, (c) taxable income in carryback years, to the extent that carrybacks are permitted under the tax laws of the applicable jurisdiction and (d) tax planning strategies, which represent prudent and feasible actions that a company ordinarily might not take, but would take to prevent an operating loss or tax credit carryforward from expiring unused. To the extent that evidence about one or more of these sources of taxable income is sufficient to support a conclusion that a valuation allowance is not necessary, other sources need not be considered. Otherwise, evidence about each of the sources of taxable income is considered in arriving at a conclusion about the need for and amount of a valuation allowance. See Note 14, *Income Taxes*, for further information about the Company's valuation allowance assessments.

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The Company is subject to taxation in the United States, various states and foreign jurisdictions. Significant judgment is required in determining the worldwide provision for income taxes and recording the related income tax assets and liabilities. During the ordinary course of business, there are many transactions and calculations for which the ultimate tax determination is uncertain. For example, the Company's effective tax rate could be adversely affected by earnings being lower than anticipated in countries where it has lower statutory rates and higher than anticipated in countries where it has higher statutory rates, by changes in foreign currency exchange rates, by changes in the valuation of deferred tax assets and liabilities, or by changes in the relevant laws, regulations, principles and interpretations. The Company accounts for uncertainty in income taxes by recognizing the financial statement benefit of a tax position only after determining that the relevant tax authority would more-likely-than-not sustain the position following an audit. For tax positions meeting the more-likely-than-not criteria, the amount recognized in the consolidated financial statements is the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate settlement with the relevant tax authority.

Lease and Asset Retirement Obligations

The Company classifies leases at their inception as either operating or capital leases and may receive renewal or expansion options, rent holidays, and leasehold improvement or other incentives on certain lease agreements. The Company recognizes operating lease costs on a straight-line basis, taking into account adjustments for free or escalating rental payments and deferred payment terms. Additionally, lease incentives are accounted for as a reduction of lease costs over the lease term. Rent expense associated with operating lease obligations is primarily classified within "Selling, general and administrative" on the consolidated statements of operations. Minimum lease payments made under capital leases are apportioned between interest expense, which is presented within "Other income (expense), net" on the consolidated statements of operations, and a reduction of the related capital lease obligations, which are classified within "Accrued expenses and other current liabilities" and "Non-current liabilities" on the consolidated balance sheets.

The Company establishes assets and liabilities for the present value of estimated future costs to retire long-lived assets at the termination or expiration of a lease. Such assets are amortized over the lease term, and the recorded liabilities are accreted to the future value of the estimated retirement costs. The related amortization and accretion expenses are presented within "Selling, general and administrative" on the consolidated statements of operations.

Revenue Recognition

The Company recognizes revenue when the following criteria are met: persuasive evidence of an arrangement exists; delivery has occurred; the selling price is fixed or determinable; and collection is reasonably assured.

Third-party revenue

The Company generates third-party revenue from transactions in which it acts as a marketing agent, primarily by selling vouchers ("Groupons") through its online local commerce marketplaces that can be redeemed for goods or services with third-party merchants. The Company's marketplaces include three primary categories of offerings: Local, Goods and Travel.

Third-party revenue is reported on a net basis as the purchase price received from the customer for the voucher less the portion of the purchase price that is payable to the featured merchant. Revenue is presented on a net basis because the Company is acting as a marketing agent of the merchant in those transactions.

Third-party revenue is recognized when the customer purchases a voucher, the voucher has been electronically delivered to the purchaser and a listing of vouchers sold has been made available to the merchant. At that time, the Company's obligations to the merchant, for which it is serving as a marketing agent, are substantially complete. The Company's remaining obligations, which are limited to remitting payment to the merchant and continuing to make available on its website information about vouchers sold that was previously provided to the merchant, are inconsequential and perfunctory administrative activities. For a portion of the hotel offerings available through the Company's online local marketplaces, customers make room reservations directly through its websites. Such reservations are generally cancelable at any time prior to check-in and the Company defers the revenue on those transactions until the customer's stay commences.

For merchant payment arrangements that are structured under a redemption model, merchants are not paid until the customer redeems the voucher that has been purchased. If a customer does not redeem the voucher under this payment model, the

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Company retains all of the gross billings. The Company recognizes incremental revenue from unredeemed vouchers and derecognizes the related accrued merchant payable when its legal obligation to the merchant expires, which the Company believes is shortly after deal expiration in most jurisdictions that have payment arrangements structured under a redemption model.

Direct revenue

The Company generates direct revenue from selling merchandise inventory through its Goods category in transactions for which it is the merchant of record.

Direct revenue is reported on a gross basis as the purchase price received from the customer. The Company is the primary obligor in those transactions, is subject to general inventory risk and has latitude in establishing prices. For Goods transactions in which the Company acts as a marketing agent of a third-party merchant, revenue is recorded on a net basis and is presented within third-party revenue.

Direct revenue, including associated shipping revenue, is recognized when title passes to the customer upon delivery of the product.

Other revenue

Commission revenue is earned when customers make purchases with retailers using digital coupons accessed through the Company's websites and mobile applications. The Company recognizes that commission revenue in the period when the underlying transactions are completed. Advertising revenue is recognized when the advertiser's logo or website link has been included on the Company's websites or in specified email distributions for the requisite period of time as set forth in the agreement with the advertiser.

Refunds

Estimated refunds are recorded as a reduction of revenue, except for refunds on third-party revenue transactions for which the merchant's share is not recoverable, which are presented as a cost of revenue. The liability for estimated refunds is included within "Accrued expenses and other current liabilities" on the consolidated balance sheets.

The Company estimates future refunds utilizing a statistical model that incorporates historical refund experience, including the relative risk of refunds based on transaction value and deal category. The portion of customer refunds for which the merchant's share is not recoverable on third-party revenue deals is estimated based on the refunds that are expected to be issued after expiration of the related vouchers, the refunds that are expected to be issued due to merchant bankruptcies or poor customer experience and whether the payment terms of the related merchant contracts are structured using a redemption payment model or a fixed payment model.

The Company assesses the trends that could affect its estimates on an ongoing basis and makes adjustments to the refund reserve calculations if it appears that changes in circumstances, including changes to the Company's refund policies or general economic conditions, may cause future refunds to differ from its initial estimates. If actual results are not consistent with the estimates or assumptions stated above, the Company may need to change its future estimates, and the effects could be material to the consolidated financial statements.

Discounts

The Company provides discount offers to encourage purchases of goods and services through its marketplaces. The Company records discounts as a reduction of revenue.

Sales and related taxes

Sales, use, value-added and related taxes that are imposed on specific revenue-generating transactions are presented on a net basis and excluded from revenue.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Cost of revenue

Cost of revenue is comprised of direct and certain indirect costs incurred to generate revenue. For direct revenue transactions, cost of revenue includes the cost of inventory, shipping and fulfillment costs and inventory markdowns. Fulfillment costs are comprised of third-party logistics provider costs, as well as rent, depreciation, personnel costs and other costs of operating the Company's fulfillment center. For third-party revenue transactions, cost of revenue includes estimated refunds for which the merchant's share is not recoverable. Other costs incurred to generate revenue, which include credit card processing fees, editorial costs, compensation expense for technology support personnel who are responsible for maintaining the infrastructure of the Company's websites, amortization of internal-use software relating to customer-facing applications, web hosting and other processing fees, are attributed to cost of third-party revenue, direct revenue and other revenue in proportion to gross billings during the period.

Customer Credits

The Company issues credits to its customers that can be applied against future purchases through its online local marketplaces for certain qualifying acts, such as referring new customers, and also to satisfy refund requests. The Company has recorded its customer credit obligations within "Accrued expenses and other current liabilities" on the consolidated balance sheets (Note 8, *Supplemental Consolidated Balance Sheet and Statements of Operations Information*). Customer credit obligations incurred for new customer referrals or other qualifying acts are expensed as incurred and are classified within "Marketing" on the consolidated statements of operations. Customer credits issued to satisfy refund requests are applied as a reduction to the refunds reserve.

Stock-Based Compensation

The Company measures stock-based compensation cost at fair value. Expense is generally recognized on a straight-line basis over the service period during which awards are expected to vest, except for awards with both performance conditions and a graded vesting schedule, which are recognized using the accelerated method. The Company presents stock-based compensation expense within the consolidated statements of operations based on the classification of the respective employees' cash compensation. See Note 12, *Compensation Arrangements*.

Foreign Currency

Balance sheet accounts of the Company's operations outside of the United States are translated from foreign currencies into U.S. dollars at exchange rates as of the consolidated balance sheet dates. Revenue and expenses are translated at average exchange rates during the period. Foreign currency translation adjustments and foreign currency gains and losses on intercompany balances that are of a long-term investment nature are included within "Accumulated other comprehensive income" on the consolidated balance sheets. Foreign currency gains and losses resulting from transactions which are denominated in currencies other than the entity's functional currency, including foreign currency gains and losses on intercompany balances that are not of a long-term investment nature, are included within "Other income (expense), net" on the consolidated statements of operations.

Recently Issued Accounting Standards

In May 2014, the Financial Accounting Standards Board ("FASB") issued ASU 2014-09, *Revenue from Contracts with Customers*. This ASU is a comprehensive new revenue recognition model that requires a company to recognize revenue to depict the transfer of goods or services to a customer at an amount that reflects the consideration it expects to receive in exchange for those goods or services. In March 2016, the FASB issued ASU 2016-08, *Revenue from Contracts with Customers: Principal versus Agent Considerations (Reporting Gross versus Net)*, which is effective upon adoption of ASU 2014-09. This ASU clarifies the implementation guidance in ASU 2014-09 on principal versus agent considerations. These ASUs are effective for annual reporting periods beginning after December 15, 2017 and interim periods within those annual periods. For merchant payment arrangements that are structured under a redemption model, the Company expects that it will be required to estimate the incremental revenue from vouchers that will not ultimately be redeemed and recognize that amount as revenue at the time of sale under ASU 2014-09, rather than when its legal obligation expires. The potential impact of that change could increase or decrease the Company's revenue in any given period as compared to its current policy depending on the relative amounts of the estimated incremental revenue from unredeemed vouchers on current transactions as compared to the actual incremental revenue from vouchers that expire unredeemed in that period. The Company is still evaluating these ASUs for other potential impacts on its consolidated financial statements.

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

In July 2015, the FASB issued ASU 2015-11, *Inventory (Topic 330) - Simplifying the Measurement of Inventory*. This ASU requires inventory to be measured at the lower of cost or net realizable value, rather than the lower of cost or market. The ASU is effective for annual reporting periods beginning after December 31, 2016 and interim periods within those annual periods. The Company does not believe that the adoption of this guidance will have a material impact on its consolidated financial statements.

In January 2016, the FASB issued ASU 2016-01, *Financial Instruments (Topic 825-10) - Recognition and Measurement of Financial Assets and Financial Liabilities*. This ASU requires equity securities to be measured at fair value with changes in fair value recognized through net income and will eliminate the cost method for equity securities without readily determinable fair values. The ASU is effective for annual reporting periods beginning after December 15, 2017 and interim periods within those annual periods. The impact of the ASU on the Company's cost method investments will depend on changes in their fair values in periods after the adoption date. While the Company is still assessing the impact of ASU 2016-01, it does not expect that the adoption of this guidance will otherwise have a material impact on its consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. The ASU will require lessees to recognize assets and liabilities arising from leases, including operating leases, to be recognized on the balance sheet. The ASU is effective for annual reporting periods beginning after December 31, 2018 and interim periods within those annual periods. The Company is still assessing the impact of ASU 2016-02. See Note 10, *Commitments and Contingencies*, for information about the Company's lease commitments.

In October 2016, the FASB issued ASU 2016-16, *Intra-Entity Transfers of Assets Other Than Inventory (Topic 740)*. This ASU requires immediate recognition of the income tax consequences of intercompany asset transfers other than inventory. The ASU is effective for annual reporting periods beginning after December 15, 2017 and interim periods within those annual periods.

The Company currently expects to early adopt this guidance on January 1, 2017 and estimates that it would record a cumulative effect adjustment to increase its accumulated deficit by approximately \$3.0 million as of that date.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230) - Restricted Cash*. This ASU requires that companies include amounts generally described as restricted cash and restricted cash equivalents, along with cash and cash equivalents, when reconciling the beginning-of-period and end-of-period amounts shown on the statement of cash flows. The ASU is effective for annual reporting periods beginning after December 15, 2017 and interim periods within those annual periods. While the Company is still assessing the impact of ASU 2016-18, it does not believe that the adoption of this guidance will have a material impact on its consolidated financial statements.

In January 2017, the FASB issued ASU 2017-04, *Intangibles - Goodwill and Other (Topic 350) - Simplifying the Test for Goodwill Impairment*. This ASU eliminates Step 2 of the goodwill impairment test and requires a goodwill impairment to be measured as the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of its goodwill. The ASU is effective for annual or any interim goodwill impairment tests in fiscal years beginning after December 15, 2019. While the Company is still assessing the impact of ASU 2017-04, it does not believe that the adoption of this guidance will have a material impact on its consolidated financial statements.

There are no other accounting standards that have been issued but not yet adopted that the Company believes could have a material impact on its consolidated financial position or results of operations.

3. DISCONTINUED OPERATIONS AND OTHER DISPOSITIONS

Discontinued Operations

On May 27, 2015, the Company sold a controlling stake in Ticket Monster to an investor group. See Note 7, *Investments*, for information about this transaction. The Company recognized a pretax gain on the disposition of \$202.2 million (\$154.1 million net of tax), which represents the excess of (a) the \$398.8 million in net consideration received, consisting of (i) \$285.0 million in cash proceeds and (ii) the \$122.1 million fair value of its retained minority investment, less (iii) \$8.3 million in transaction costs, over (b) the sum of (i) the \$184.3 million net book value of Ticket Monster upon the closing of the transaction and (ii) Ticket Monster's \$12.3 million cumulative translation loss, which was reclassified to earnings.

For disposal transactions that occur on or after that January 1, 2015, a component of an entity is reported in discontinued operations after meeting the criteria for held-for-sale classification if the disposition represents a strategic shift that has (or will have) a major effect on the entity's operations and financial results. The Company analyzed the quantitative and qualitative factors relevant to the Ticket Monster disposition transaction and determined that those conditions for discontinued operations presentation

Groupon, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

have been met. As such, the financial results of Ticket Monster, the gain on disposition and the related income tax effects are reported within discontinued operations in the accompanying consolidated financial statements.

The following table summarizes the major classes of line items included in income (loss) from discontinued operations, net of tax, for the years ended December 31, 2015 and 2014 (in thousands):

	Year Ended December 31,	
	2015 ⁽¹⁾	2014
Third-party and other revenue	\$ 28,145	\$ 126,528
Direct revenue	39,065	23,037
Third-party and other cost of revenue	(13,958)	(38,827)
Direct cost of revenue	(38,031)	(26,861)
Marketing expense	(8,495)	(27,089)
Selling, general and administrative expense	(38,102)	(102,331)
Other income (expense), net	96	97
Loss from discontinued operations before gain on disposition and provision for income taxes	(31,280)	(45,446)
Gain on disposition	202,158	—
Provision for income taxes	(48,028)	—
Income (loss) from discontinued operations, net of tax	\$ 122,850	\$ (45,446)

(1) The income from discontinued operations, net of tax, for the year ended December 31, 2015 includes the results of Ticket Monster through the disposition date of May 27, 2015.

The \$48.0 million provision for income taxes for the year ended December 31, 2015 reflects (i) the \$74.8 million current and deferred income tax effects of the Ticket Monster disposition, partially offset by (ii) a \$26.8 million tax benefit that resulted from the recognition of a deferred tax asset related to the excess of the tax basis over the financial reporting basis of the Company's investment in Ticket Monster upon meeting the criteria for held-for-sale classification. No income tax benefits were recognized for the year ended December 31, 2014 because valuation allowances were provided against the related net deferred tax assets.

Other Dispositions

The gains from the transactions below are presented within "Gains on business dispositions" in the accompanying consolidated statements of operations. The financial results of those entities are presented within income from continuing operations in the accompanying consolidated financial statements through their respective disposition dates. Those financial results were not material for the years ended December 31, 2016 and 2015.

Groupon Russia

On April 12, 2016, the Company sold its subsidiary in Russia ("Groupon Russia"). The Company recognized a pretax gain on the disposition of \$8.9 million, consisting of Groupon Russia's \$1.6 million negative net book value upon the closing of the transaction and its \$7.7 million cumulative translation gain, which was reclassified to earnings, less \$0.4 million in transaction costs. The Company did not receive any proceeds in connection with the transaction.

Breadcrumb

On May 9, 2016, the Company sold its point of sale business ("Breadcrumb") in exchange for a minority investment in the acquirer. See Note 7, *Investments*, for information about this transaction. The Company recognized a pretax gain on the disposition of \$0.4 million, which represents the excess of (a) \$8.2 million in net consideration received, consisting of the \$8.3 million fair value of the investment acquired, less \$0.1 million in transaction costs, over (b) the \$7.8 million net book value of Breadcrumb upon the closing of the transaction. The Company did not receive any cash proceeds in connection with the transaction.

Groupon Indonesia

On August 5, 2016, the Company sold its subsidiary in Indonesia ("Groupon Indonesia") in exchange for a minority investment in the acquirer. See Note 7, *Investments*, for information about this transaction. The Company recognized a pretax gain on the disposition of \$2.1 million, which represents the excess of \$2.4 million in net consideration received, consisting of the \$2.7

Groupon, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

million fair value of the investment acquired, less \$0.3 million in transaction costs, over the sum of (i) the \$0.1 million net book value of Groupon Indonesia upon closing of the transaction and (ii) its \$0.2 million cumulative translation loss, which was reclassified to earnings. The Company did not receive any cash proceeds in connection with the transaction.

Groupon Malaysia

On November 28, 2016, the Company sold its subsidiary in Malaysia ("Groupon Malaysia") in exchange for a minority investment in the acquirer. See Note 7, *Investments*, for information about this transaction. The Company recognized a pretax gain on the disposition of \$0.3 million, which represents the excess of \$2.3 million in net consideration received, consisting of the \$2.5 million fair value of the investment acquired, less \$0.2 million in transaction costs, over the sum of (i) the \$0.8 million net book value of Groupon Malaysia upon closing of the transaction and (ii) its \$1.2 million cumulative translation loss, which was reclassified to earnings. The Company did not receive any cash proceeds in connection with the transaction.

Groupon India

On August 6, 2015, the Company's subsidiary in India ("Groupon India") completed an equity financing transaction with a third-party investor that obtained a majority voting interest in the entity. See Note 7, *Investments*, for information about this transaction. The Company recognized a pretax gain on the disposition of \$13.7 million, which represents the excess of (a) the sum of (i) \$14.2 million in net consideration received, consisting of the \$16.4 million fair value of its retained minority investment, less \$1.3 million in transaction costs and a \$0.9 million guarantee liability and (ii) Groupon India's \$0.9 million cumulative translation gain, which was reclassified to earnings, over (b) the \$1.4 million net book value of Groupon India upon the closing of the transaction. The Company did not receive any cash proceeds in connection with the transaction.

4. BUSINESS COMBINATIONS**2016 Acquisition Activity**

The Company acquired three businesses during the year ended December 31, 2016 and the results of each of those acquired businesses are included in the consolidated financial statements beginning on the respective acquisition dates. The fair value of consideration transferred in business combinations is allocated to the tangible and intangible assets acquired and liabilities assumed at the acquisition date, with the remaining unallocated amount recorded as goodwill. The allocations of the acquisition price for recent acquisitions have been prepared on a preliminary basis, and changes to those allocations may occur as a result of final tax return filings. Acquired goodwill represents the premium the Company paid over the fair value of the net tangible and intangible assets acquired. The Company paid these premiums for a number of reasons, including growing the Company's merchant and customer base and acquiring an assembled workforce. The goodwill from these business combinations is generally not deductible for tax purposes.

For the years ended December 31, 2016, 2015 and 2014, \$1.6 million, \$1.6 million and \$3.7 million, respectively, of external transaction costs related to business combinations, primarily consisting of legal and advisory fees, are classified within "Acquisition-related expense (benefit), net" on the consolidated statements of operations.

LivingSocial, Inc.

On October 31, 2016, the Company acquired all of the outstanding equity interests of LivingSocial, Inc. ("LivingSocial"), an e-commerce company that connects merchants to consumers by offering goods and services, generally at a discount. The primary purpose of this acquisition was to grow the Company's customer base. The Company acquired LivingSocial for no consideration.

The following table summarizes the assets acquired and liabilities assumed from the LivingSocial acquisition (in thousands):

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Cash and cash equivalents	\$	15,479
Accounts receivable		3,652
Prepaid expenses and other current assets		2,399
Property, equipment and software		1,075
Goodwill		528
Intangible assets: ⁽¹⁾		
Customer relationships		16,200
Merchant relationships		2,700
Trade name		1,000
Developed technology		2,500
Other non-current assets		5,495
Total assets acquired	\$	51,028
Accounts payable	\$	2,184
Accrued merchant and supplier payables		18,498
Accrued expenses and other current liabilities		25,854
Other non-current liabilities		4,492
Total liabilities assumed	\$	51,028
Total acquisition price	\$	—

(1) The estimated useful lives of the acquired intangible assets are 1 year for developed technology, 4 years for trade name and 3 years for merchant relationships and customer relationships.

The following pro forma information presents the combined operating results of the Company for the year ended December 31, 2015 and for the period from January 1, 2016 through October 31, 2016, as if the Company had acquired LivingSocial as of January 1, 2015 (in thousands). The underlying pro forma results include the historical financial results of the Company and this acquired business adjusted for depreciation and amortization expense associated with the assets acquired. The pro forma results do not reflect any operating efficiencies or potential cost savings which may result from the consolidation of the operations of the Company and the acquired entity. Accordingly, these pro forma results are not necessarily indicative of what the actual results of operations of the combined company would have been if the acquisition had occurred as of January 1, 2015, nor are they indicative of future results of operations.

	Year Ended December 31, 2016	Year Ended December 31, 2015
Revenue	\$ 3,200,170	\$ 3,264,789
Loss from continuing operations	(199,895)	(110,680)

The revenue and net loss of LivingSocial included in the Company's consolidated statements of operations were \$9.3 million and \$4.3 million, respectively, for the period from October 31, 2016 through December 31, 2016.

Other Acquisitions

The Company acquired two other businesses during the year ended December 31, 2016. The acquisition price of these businesses and the assets acquired and liabilities assumed were not material.

2015 Acquisition Activity

The Company acquired seven businesses during the year ended December 31, 2015 and the results of each of those acquired businesses are included in the consolidated financial statements beginning on the respective acquisition dates.

Groupon, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

OrderUp, Inc.

On July 16, 2015, the Company acquired all of the outstanding equity interests of OrderUp, Inc. ("OrderUp"), an on-demand online and mobile food ordering and delivery marketplace based in the United States. The purpose of this acquisition was to expand the Company's local offerings in the food ordering and delivery sector, acquire an assembled workforce and enhance related technology capabilities. The acquisition-date fair value of the consideration transferred for the OrderUp acquisition totaled \$78.4 million, which consisted of the following (in thousands):

Cash	\$ 68,749
Contingent consideration	9,605
Total	<u>\$ 78,354</u>

The following table summarizes the allocation of the acquisition price of the OrderUp acquisition (in thousands):

Cash and cash equivalents	\$ 2,264
Accounts receivable	1,377
Prepaid expenses and other current assets	404
Property, equipment and software	24
Goodwill	60,080
Intangible assets: ⁽¹⁾	
Customer relationships	5,600
Merchant relationships	1,100
Developed technology	11,300
Trade name	900
Other intangible assets	1,850
Other non-current assets	31
Total assets acquired	<u>\$ 84,930</u>
Accounts payable	\$ 901
Accrued merchant and supplier payables	1,021
Accrued expenses and other current liabilities	2,918
Deferred income taxes	1,715
Other non-current liabilities	21
Total liabilities assumed	<u>\$ 6,576</u>
Total acquisition price	<u>\$ 78,354</u>

- (1) The estimated useful lives of the acquired intangible assets are 5 years for trade name, 4 years for other intangible assets and 3 years for customer relationships, merchant relationships and developed technology.

Other Acquisitions

The Company acquired six other businesses during the year ended December 31, 2015. The primary purpose of these acquisitions was to acquire assembled workforces, expand and advance product offerings and enhance technology capabilities. The acquisition-date fair value of the consideration transferred for these acquisitions totaled \$6.0 million, which consisted of the following (in thousands):

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Cash	\$	5,744
Liability for purchase consideration		250
Total	\$	5,994

The following table summarizes the allocation of the acquisition price of the other acquisitions for the year ended December 31, 2015 (in thousands):

Net working capital deficit (including acquired cash of \$2.3 million)	\$	(647)
Goodwill		2,898
Intangible assets: ⁽¹⁾		
Customer relationships		1,016
Merchant relationships		809
Developed technology		1,339
Brand relationships		296
Other intangible assets		283
Total acquisition price	\$	5,994

(1) Acquired intangible assets have estimated useful lives of between 1 and 5 years.

Pro forma results of operations for the OrderUp acquisition and these other acquisitions are not presented because the pro forma effects of those acquisitions, individually or in the aggregate, were not material to the Company's consolidated results of operations for the years ended December 31, 2015 and 2014.

2014 Acquisition Activity

The Company acquired six businesses during the year ended December 31, 2014.

LivingSocial Korea, Inc.

On January 2, 2014, the Company acquired all of the outstanding equity interests of LivingSocial Korea, Inc., a Korean corporation and holding company of Ticket Monster. Ticket Monster is an e-commerce company based in the Republic of Korea that connects merchants to consumers by offering goods and services at a discount. The primary purpose of this acquisition was to grow the Company's merchant and customer base and expand its presence in the Korean e-commerce market. On May 27, 2015, the Company sold a controlling stake in Ticket Monster that resulted in its deconsolidation. See Note 3, *Discontinued Operations and Other Dispositions*, for additional information.

The acquisition-date fair value of the consideration transferred for the Ticket Monster acquisition totaled \$259.4 million, which consisted of the following (in thousands):

Cash	\$	96,496
Issuance of 13,825,283 shares of Class A common stock		162,862
Total	\$	259,358

The fair value of the Class A common stock issued as consideration was measured based on the stock price upon closing of the transaction on January 2, 2014.

Groupon, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following table summarizes the allocation of the acquisition price of the Ticket Monster acquisition (in thousands):

Cash and cash equivalents	\$	24,768
Accounts receivable		17,732
Prepaid expenses and other current assets		829
Property, equipment and software		5,944
Goodwill		218,692
Intangible assets: ⁽¹⁾		
Customer relationships		57,022
Merchant relationships		32,176
Developed technology		571
Trade name		19,325
Deferred income taxes		1,264
Other non-current assets		3,033
Total assets acquired	\$	381,356
Accounts payable	\$	5,951
Accrued merchant and supplier payables		82,934
Accrued expenses and other current liabilities		26,182
Deferred income taxes		1,264
Other non-current liabilities		5,667
Total liabilities assumed	\$	121,998
Total acquisition price	\$	259,358

(1) The estimated useful lives of the acquired intangible assets are 5 years for customer relationships, 3 years for merchant relationships, 2 years for developed technology and 5 years for trade name.

Ideeli, Inc.

On January 13, 2014, the Company acquired all of the outstanding equity interests of Ideeli, Inc. (d/b/a "Ideel"), a fashion flash site based in the United States. The primary purpose of this acquisition was to expand and advance the Company's product offerings. The acquisition-date fair value of the consideration transferred for the Ideel acquisition totaled \$42.7 million in cash.

Groupon, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following table summarizes the allocation of the acquisition price of the Ideel acquisition (in thousands):

Cash and cash equivalents	\$	79
Accounts receivable		988
Prepaid expenses and other current assets		22,081
Property, equipment and software		8,173
Goodwill		4,203
Intangible assets: ⁽¹⁾		
Customer relationships		5,490
Brand relationships		7,100
Trade name		4,500
Deferred income taxes		9,517
Total assets acquired	\$	62,131
Accounts payable	\$	1,640
Accrued supplier payables		4,092
Accrued expenses and other current liabilities		9,600
Deferred income taxes		348
Other non-current liabilities		3,753
Total liabilities assumed	\$	19,433
Total acquisition price	\$	42,698

(1) The estimated useful lives of the acquired intangible assets are 3 years for customer relationships, 5 years for brand relationships and 5 years for trade name.

Other Acquisitions

The Company acquired four other businesses during the year ended December 31, 2014. The primary purpose of these acquisitions was to acquire an experienced workforce, expand and advance product offerings and enhance technology capabilities. The acquisition-date fair value of the consideration transferred for these acquisitions totaled \$32.9 million, which consisted of the following (in thousands):

Cash	\$	17,364
Issuance of 1,429,897 shares of Class A common stock		11,110
Contingent consideration		4,388
Total	\$	32,862

The fair value of the Class A common stock issued as acquisition consideration was measured based on the stock price upon closing of the related transaction on November 13, 2014.

Groupon, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following table summarizes the allocation of the purchase price of these other acquisitions (in thousands):

Net working capital (including acquired cash of \$0.2 million)	\$ (396)
Goodwill	27,150
Intangible assets: ⁽¹⁾	
Customer relationships	2,555
Developed technology	3,372
Brand relationships	579
Deferred income taxes	(398)
Total acquisition price	<u>\$ 32,862</u>

(1) Acquired intangible assets have estimated useful lives of between 1 and 5 years.

Pro forma results of operations for the Ticket Monster acquisition, the Ideel acquisition and these other acquisitions are not presented because the pro forma effects of those acquisitions, individually or in the aggregate, were not material to the Company's consolidated results of operations for the year ended December 31, 2014.

5. PROPERTY, EQUIPMENT AND SOFTWARE, NET

The following summarizes the Company's property, equipment and software, net (in thousands):

	December 31,	
	2016	2015
Warehouse equipment	\$ 4,863	\$ 4,838
Furniture and fixtures	15,136	15,837
Leasehold improvements	47,115	45,543
Office equipment	3,539	3,916
Purchased software	35,951	40,029
Computer hardware ⁽¹⁾	200,215	185,676
Internally-developed software ⁽²⁾	213,137	188,602
Total property, equipment and software, gross	519,956	484,441
Less: accumulated depreciation and amortization	(348,950)	(285,544)
Property, equipment and software, net	<u>\$ 171,006</u>	<u>\$ 198,897</u>

(1) Includes computer hardware acquired under capital leases of \$104.3 million and \$86.7 million as of December 31, 2016 and 2015, respectively.

(2) The net carrying amount of internally-developed software was \$70.5 million and \$69.6 million as of December 31, 2016 and 2015, respectively.

Depreciation and amortization expense on property, equipment and software is classified as follows in the accompanying consolidated statements of operations for the years ended December 31, 2016, 2015 and 2014:

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

	Year Ended December 31,		
	2016	2015	2014
Cost of revenue - third-party and other	\$ 21,277	\$ 16,299	\$ 9,028
Cost of revenue - direct	10,663	9,273	4,813
Selling, general and administrative	86,780	87,476	80,304
Total	<u>\$ 118,720</u>	<u>\$ 113,048</u>	<u>\$ 94,145</u>

The above amounts include amortization of internally-developed software of \$55.0 million , \$50.0 million and \$42.1 million , respectively, and amortization expense on assets under capital leases of \$29.8 million , \$24.2 million and \$7.2 million , respectively, for the years ended December 31, 2016 , 2015 and 2014 .

6. GOODWILL AND OTHER INTANGIBLE ASSETS

The following table summarizes the Company's goodwill activity by segment for the years ended December 31, 2016 and 2015 (in thousands):

	North America	EMEA	Rest of World	Consolidated
Balance as of December 31, 2014	\$ 116,718	\$ 102,179	\$ 17,859	\$ 236,756
Goodwill related to acquisitions	62,029	—	949	62,978
Goodwill related to disposition	—	—	(975)	(975)
Foreign currency translation	(1)	(10,116)	(1,310)	(11,427)
Balance as of December 31, 2015	\$ 178,746	\$ 92,063	\$ 16,523	\$ 287,332
Goodwill related to acquisitions	1,199	—	—	1,199
Goodwill related to dispositions	(1,260)	—	(586)	(1,846)
Foreign currency translation	—	(2,480)	(243)	(2,723)
Balance as of December 31, 2016	<u>\$ 178,685</u>	<u>\$ 89,583</u>	<u>\$ 15,694</u>	<u>\$ 283,962</u>

The Company evaluates goodwill for impairment annually on October 1 or more frequently when an event occurs or circumstances change that indicates the carrying value may not be recoverable. No goodwill impairments were recognized for the years ended December 31, 2016 , 2015 and 2014 .

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following tables summarize the Company's intangible assets (in thousands):

<u>Asset Category</u>	December 31, 2016		
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Customer relationships	\$ 67,620	\$ 48,282	\$ 19,338
Merchant relationships	12,103	8,563	3,540
Trade names	11,903	8,373	3,530
Developed technology	38,457	30,266	8,191
Brand relationships	7,960	4,665	3,295
Patents	17,259	14,020	3,239
Other intangible assets	6,083	4,301	1,782
Total	<u>\$ 161,385</u>	<u>\$ 118,470</u>	<u>\$ 42,915</u>

<u>Asset Category</u>	December 31, 2015		
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Customer relationships	\$ 52,204	\$ 43,725	\$ 8,479
Merchant relationships	9,648	8,064	1,584
Trade names	11,013	7,396	3,617
Developed technology	37,103	25,436	11,667
Brand relationships	7,960	3,073	4,887
Patents	15,774	11,810	3,964
Other intangible assets	4,864	2,579	2,285
Total	<u>\$ 138,566</u>	<u>\$ 102,083</u>	<u>\$ 36,483</u>

Amortization of intangible assets is computed using the straight-line method over their estimated useful lives, which range from 1 to 5 years. Amortization expense related to intangible assets was \$18.9 million, \$19.9 million and \$20.9 million for the years ended December 31, 2016, 2015 and 2014, respectively. As of December 31, 2016, the Company's estimated future amortization expense related to intangible assets is as follows (in thousands):

Years Ended December 31,	
2017	\$ 20,629
2018	14,668
2019	6,566
2020	898
2021	154
Thereafter	—
Total	<u>\$ 42,915</u>

Groupon, Inc.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

7. INVESTMENTS

The following table summarizes the Company's investments (dollars in thousands):

	December 31, 2016	Percent Ownership of Voting Stock	December 31, 2015	Percent Ownership of Voting Stock
Available-for-sale securities				
Convertible debt securities	\$ 10,038		\$ 10,116	
Redeemable preferred shares	17,444	19% to 25%	22,834	17% to 25%
Total available-for-sale securities	27,482		32,950	
Cost method investments	31,816	1% to 19%	14,561	2% to 10%
Fair value option investments	82,584	41%	130,725	43% to 45%
Total investments	\$ 141,882		\$ 178,236	

The following table summarizes the amortized cost, gross unrealized gain, gross unrealized loss and fair value of the Company's available-for-sale securities as of December 31, 2016 and 2015, respectively (in thousands):

	December 31, 2016				December 31, 2015			
	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss ⁽¹⁾	Fair Value	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss ⁽¹⁾	Fair Value
Available-for-sale securities:								
Convertible debt securities	\$ 8,453	\$ 1,691	\$ (106)	\$ 10,038	\$ 9,234	\$ 882	\$ —	\$ 10,116
Redeemable preferred shares	18,375	—	(931)	17,444	22,973	—	(139)	22,834
Total available-for-sale securities	\$ 26,828	\$ 1,691	\$ (1,037)	\$ 27,482	\$ 32,207	\$ 882	\$ (139)	\$ 32,950

- (1) As of December 31, 2016, available-for-sale securities with an unrealized loss have been in a loss position for less than 12 months, except for one security in a loss position of \$0.1 million. As of December 31, 2015, available-for-sale securities with an unrealized loss had been in a loss position for less than 12 months.

Fair Value Option Investments

In connection with the dispositions of Ticket Monster in May 2015 and Groupon India in August 2015, the Company obtained a minority limited partner interest in Monster LP and a minority investment in GroupMax Pte Ltd. ("GroupMax," d/b/a "Nearbuy"). The Company has made an irrevocable election to account for both of these investments at fair value with changes in fair value reported in earnings. The Company elected to apply fair value accounting to these investments because it believes that fair value is the most relevant measurement attribute for these investments, as well as to reduce operational and accounting complexity.

Monster LP

In May 2015, the Company completed the sale of a controlling stake in Ticket Monster to an investor group, whereby (a) the investor group contributed \$350.0 million in cash to Monster Holdings LP ("Monster LP"), a newly-formed limited partnership, in exchange for 70,000,000 Class A units of Monster LP and (b) the Company contributed all of the issued and outstanding share capital of Ticket Monster to Monster LP in exchange for (i) 64,000,000 Class B units of Monster LP and (ii) \$285.0 million in cash consideration. Mr. Daniel Shin, the chief executive officer and founder of Ticket Monster, contributed \$10.0 million of cash consideration to Monster LP shortly after the closing date in exchange for 2,000,000 Class A units of Monster LP. Additionally, Monster LP was authorized to issue 20,321,839 Class C units to its management, subject to vesting conditions. Under the terms

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

of the Partnership's amended and restated agreement of limited partnership, its general partner established a Board of Directors and irrevocably assigned the rights to carry out any and all of the objectives and purposes of the partnership to its Board. The general partner is not entitled to receive any distributions.

During the fourth quarter of 2015, the Company sold 2,515,461 Class B units for \$4.8 million to Mr. Daniel Shin and other employees of Ticket Monster, which resulted in a gain of \$0.1 million.

In January 2016, all 20,321,839 of the authorized Class C units were granted to Monster LP's employees. Those share-based payment awards are subject to time-based vesting conditions and, for a portion of the Class C units, a performance-based vesting condition.

In December 2016, Monster LP issued a new class of partnership units (Class A-1) to its controlling investor group and a new investor for total proceeds of \$65.0 million. The fair value of Monster LP implied by the terms of the \$65.0 million equity financing transaction in December 2016 was lower than its estimated fair value in previous periods, which resulted in a significant decrease in the fair value of the Company's investment for the year ended December 31, 2016.

In February 2017, the Company participated in a recapitalization transaction with Monster LP whereby it exchanged all 61,484,539 of its Class B units for 16,609,195 newly issued Class A-1 units. The Class B units previously held by the Company were then distributed from Monster LP to its controlling investor group and certain other existing unit holders. Upon closing of the transaction, the Company owns 57% of the outstanding Class A-1 units, which represents 9% of the total outstanding partnership units.

Following the February 2017 recapitalization transaction, the Class A-1 units are entitled to a \$150.0 million liquidation preference, including an \$85.0 million liquidation preference attributable to the Class A-1 units held by the Company, which must be paid prior to any distributions to the holders of the Class A-2, Class B and Class C units. Class A-1 unit holders are also entitled to share in distributions between \$950.0 million and \$1,494.0 million in accordance with the terms of Monster LP's distribution waterfall and in distributions in excess of \$1,494.0 million based on their pro rata ownership of total outstanding partnership units. As a result of the February 2017 recapitalization transaction, the Company currently holds an investment in the most senior equity units in Monster LP's capital structure. However, while providing more downside protection, those Class A-1 units provide less opportunity for appreciation than the Class B units previously held by the Company.

To determine the fair value of the Company's investment in Monster LP each period, the first step was to estimate the fair value of Monster LP in its entirety. The Company primarily used the discounted cash flow method, which is an income approach, to estimate the fair value of Monster LP. The key inputs to determining fair value under that approach are cash flow forecasts and discount rates. As of December 31, 2016 and 2015, the Company applied a discount rate of 22% in its discounted cash flow valuation of Monster LP. The Company also used a market approach valuation technique, which is based on market multiples of guideline companies, to determine the fair value of Monster LP as of December 31, 2016 and 2015. The discounted cash flow and market multiple valuations were then evaluated and weighted to determine the amount that is most representative of the fair value of the investee. Once the Company determined the fair value of Monster LP, it then determined the fair value of its specific investment in that entity. Monster LP has a complex capital structure, so the Company applied an option-pricing model that considers the liquidation preferences of the investee's respective classes of ownership interests to determine the fair value of the Company's investment in the entity. For purposes of determining the fair value of its investment in Class B units as of December 31, 2016, the Company considered the fair value of the Class A-1 units that it received in exchange for those Class B units after year-end. To further assess the reasonableness of the fair value of its investment as of December 31, 2016, the Company applied its valuation assumptions to Monster LP's December 2016 financing transaction and concluded that those assumptions were appropriately calibrated based on the pricing of that transaction.

Based on the above procedures, the Company determined that the fair value of its investment in Monster LP was \$78.7 million and \$114.0 million, respectively, as of December 31, 2016 and 2015. The Company recognized losses of \$35.4 million and \$3.4 million, respectively, from the declines in the fair value of its investment for the years ended December 31, 2016 and 2015.

The fair value of the Company's investment in Monster LP at its initial recognition in May 2015 was determined to be \$122.1 million using the backsolve valuation method, which is a form of the market approach. Under this method, assumptions

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

are made about the expected time to liquidity, volatility and risk-free rate such that the price paid by a third-party investor in a recent financing round can be used to determine the value of the entity and its other securities using option- pricing methodologies. The initial fair value of the Company's investment in Monster LP was based on the contractual liquidation preferences and the following valuation assumptions: 4-year expected time to a liquidity event, 60% volatility and a 1.3% risk-free rate. The initial fair value of Monster LP, determined using the backsolve method, was calibrated to a discounted cash flow valuation and was further corroborated using a market multiple valuation.

The following tables summarize the condensed financial information for Monster LP as of December 31, 2016 and 2015, for the year ended December 31, 2016 and for the period from May 28, 2015 through December 31, 2015 (in thousands):

	Year Ended December 31, 2016	Period from May 28, 2015 through December 31, 2015 ⁽¹⁾
Revenue	\$ 216,119	\$ 83,897
Gross profit	24,774	(18,986)
Loss before income taxes	(153,882)	(107,919)
Net loss	(153,882)	(107,919)

	December 31, 2016	December 31, 2015
Current assets	\$ 171,721	\$ 152,352
Non-current assets	466,004	483,896
Current liabilities	345,469	277,490
Non-current liabilities	22,945	5,125

- (1) The summarized financial information is presented for the period beginning May 28, 2015, after completion of the Ticket Monster disposition transaction that resulted in the Company obtaining its minority limited partner interest in Monster LP.

GroupMax

In August 2015, the Company's subsidiary in India ("Groupon India") completed an equity financing transaction with a third party investor that obtained a majority voting interest in the entity, whereby (a) the investor contributed \$17.0 million in cash to GroupMax, a newly formed Singapore-based entity, in exchange for Series A Preference Shares and (b) the Company contributed the shares of Groupon India to GroupMax in exchange for seed preference shares of GroupMax. Additionally, GroupMax is authorized to issue up to 376,096 options on ordinary shares to its employees that will be subject to time-based vesting conditions and performance-based vesting conditions. In January 2017, GroupMax issued additional Series A Preference Shares to its controlling investor for total proceeds of \$3.0 million. Upon closing of that transaction, the Series A Preference Shares are entitled to a \$20.0 million liquidation preference, which must be paid prior to any distributions to other equity holders.

To determine the fair value of the Company's investment in GroupMax each period, the first step was to estimate the fair value of GroupMax in its entirety. The Company primarily used the discounted cash flow method to estimate the fair value of GroupMax. The key inputs to determining fair value under that approach are cash flow forecasts and discount rates. As of December 31, 2016 and 2015, the Company applied discount rates of 20% in its discounted cash flow valuation of GroupMax. The Company also used a market approach valuation technique, which is based on market multiples of guideline companies, to determine the fair value of GroupMax as of December 31, 2016 and 2015. The discounted cash flow and market approach valuations are then evaluated and weighted to determine the amount that is most representative of the fair value of the investee. Once the Company has determined the fair value of GroupMax, it then determined the fair value of its specific investment in the entity. GroupMax has a complex capital structure, so the Company applied an option-pricing model that considers the liquidation preferences of the respective classes of ownership interests in GroupMax to determine the fair value of its ownership interest in the entity.

Based on the above procedures, the Company determined that the fair value of its investment in GroupMax was \$3.9 million and \$16.7 million, respectively, as of December 31, 2016 and 2015. The Company recognized a loss of \$12.8 million and a gain of \$0.3 million, respectively, from changes in the fair value of its investment in GroupMax for the years ended December 31, 2016 and 2015. The decline in the fair value of GroupMax for the year ended December 31, 2016 was primarily attributable to

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

decreases in its forecasted future cash flows. As of December 31, 2016, the Company also has an outstanding receivable due from GroupMax with a carrying amount of \$1.2 million.

The fair value of the Company's investment in GroupMax at its initial recognition in August 2015 was determined to be \$16.4 million using the backsolve valuation method, which is a form of the market approach. Under this method, assumptions are made about the expected time to liquidity, volatility and risk-free rate such that the price paid by a third-party investor in a recent financing round can be used to determine the value of the entity and its other securities using option-pricing methodologies. The initial fair value of the Company's investment in GroupMax was based on the contractual liquidation preferences and the following valuation assumptions: 5-year expected time to a liquidity event, 65% volatility and a 1.6% risk-free rate. The initial fair value of GroupMax, determined using the backsolve method, was calibrated to a discounted cash flow valuation and was further corroborated using a market multiple valuation.

The following tables summarize the condensed financial information for GroupMax as of December 31, 2016 and 2015, for the year ended December 31, 2016 and for the period from August 7, 2015 through December 31, 2015 (in thousands):

	Year Ended December 31, 2016	Period from August 7, 2015 through December 31, 2015 ⁽¹⁾
Revenue	\$ 3,024	\$ 578
Gross profit	2,570	235
Loss before income taxes	(15,701)	(11,479)
Net loss	(15,701)	(10,019)

	December 31, 2016	December 31, 2015
Current assets	\$ 3,383	\$ 3,501
Non-current assets	18,467	29,127
Current liabilities	10,458	7,674
Non-current liabilities	2,523	333

- (1) The summarized financial information is presented for the period beginning August 7, 2015, after completion of the Groupon India disposition transaction that resulted in the Company obtaining its minority investment in GroupMax.

Other Investments

In May 2016, the Company acquired a 13% minority investment in the preferred stock of a restaurant software provider as consideration for the sale of Breadcrumb. The preferred stock was recorded at its \$8.3 million acquisition date fair value and is accounted for as a cost method investment.

In August 2016, the Company acquired a 7% minority investment in the preferred stock of a company that connects consumers with fitness, beauty and wellness businesses in Asia, as consideration for the sale of Groupon Indonesia. The preferred stock was recorded at its \$2.7 million acquisition date fair value and is accounted for as a cost method investment. In November 2016, the Company acquired an additional 5% minority investment in the preferred stock of the same company, as consideration for the sale of Groupon Malaysia. The preferred stock was recorded at its \$2.5 million acquisition date fair value and is accounted for as a cost method investment.

In November 2015, the Company acquired convertible redeemable preferred shares in an entity that operates an online local commerce marketplace specializing in live events for \$18.4 million. The convertible redeemable preferred shares are accounted for as available-for-sale securities.

During the year ended December 31, 2015, the Company also invested \$6.6 million in convertible debt securities of other investees. The convertible debt securities are accounted for as available-for-sale securities.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. SUPPLEMENTAL CONSOLIDATED BALANCE SHEETS AND STATEMENTS OF OPERATIONS INFORMATION

The following table summarizes the Company's other income (expense), net for the years ended December 31, 2016, 2015 and 2014 (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Interest income	\$ 2,053	\$ 1,219	\$ 1,416
Interest expense	(15,684)	(3,001)	(883)
Impairments of investments	—	—	(2,036)
Gain (loss) on equity method investments	—	—	(459)
Gains (losses), net on changes in fair value of investments	(48,141)	(2,943)	—
Foreign currency gains (losses), net ⁽¹⁾	(12,213)	(23,799)	(31,499)
Other	(2,122)	(15)	11
Other income (expense), net	<u>\$ (76,107)</u>	<u>\$ (28,539)</u>	<u>\$ (33,450)</u>

- (1) Foreign currency gains (losses), net for the year ended December 31, 2016 includes \$5.7 million of net cumulative translation losses that were reclassified to earnings as a result of the Company's exit from certain countries as part of its restructuring plan. Foreign currency gains (losses), net for the year ended December 31, 2015 includes a \$4.4 million cumulative translation loss from the Company's legacy business in the Republic of Korea that was reclassified to earnings as a result of the Ticket Monster disposition, partially offset by a \$3.7 million net cumulative translation gain that was reclassified to earnings as a result of the Company's exit from certain countries as part of its restructuring plan. Refer to Note 13, *Restructuring* for additional information.

The following table summarizes the Company's prepaid expenses and other current assets as of December 31, 2016 and 2015 (in thousands):

	December 31,	
	2016	2015
Finished goods inventories	35,610	42,305
Prepaid expenses	46,022	49,134
Income taxes receivable	13,755	32,483
Value-added tax receivable	6,230	14,305
Other	11,818	15,478
Total prepaid expenses and other current assets	<u>\$ 113,435</u>	<u>\$ 153,705</u>

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following table summarizes the Company's accrued merchant and supplier payables as of December 31, 2016 and 2015 (in thousands):

	December 31,	
	2016	2015
Accrued merchant payables	\$ 451,284	\$ 471,607
Accrued supplier payables ⁽¹⁾	349,413	304,604
Total accrued merchant and supplier payables	<u>\$ 800,697</u>	<u>\$ 776,211</u>

(1) Amounts include payables to suppliers of inventories and providers of shipping and fulfillment services.

The following table summarizes the Company's accrued expenses and other current liabilities as of December 31, 2016 and 2015 (in thousands):

	December 31,	
	2016	2015
Refunds reserve	33,921	35,297
Compensation and benefits	60,727	50,454
Customer credits	44,092	32,293
Restructuring-related liabilities	17,193	11,556
Income taxes payable	11,124	13,885
Deferred revenue	36,491	40,396
Current portion of capital lease obligations	28,889	26,776
Other ⁽¹⁾	150,644	192,067
Total accrued expenses and other current liabilities	<u>\$ 383,081</u>	<u>\$ 402,724</u>

(1) As of December 31, 2015, Other included a \$45.0 million liability for the Company's securities litigation matter (see Note 10, *Commitments and Contingencies*). Final court approval of the settlement for that matter was granted on July 13, 2016 and the Company's settlement obligation was satisfied during the year ended December 31, 2016.

The following table summarizes the Company's other non-current liabilities as of December 31, 2016 and 2015 (in thousands):

	December 31,	
	2016	2015
Long-term tax liabilities	\$ 41,772	\$ 46,506
Capital lease obligations	19,719	30,943
Other	38,563	36,091
Total other non-current liabilities	<u>\$ 100,054</u>	<u>\$ 113,540</u>

The following table summarizes the activity for the components of accumulated other comprehensive income (loss), net of tax, for the years ended December 31, 2016, 2015 and 2014 (in thousands):

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

	Foreign currency translation adjustments	Unrealized gain (loss) on available-for- sale securities	Pension adjustments	Total
Balance at December 31, 2013	\$ 24,952	\$ (122)	\$ —	\$ 24,830
Other comprehensive income (loss) before reclassification adjustments	11,812	(210)	(1,500)	10,102
Reclassification adjustment included in net income (loss)	—	831	—	831
Other comprehensive income (loss)	11,812	621	(1,500)	10,933
Balance as of December 31, 2014	36,764	499	(1,500)	35,763
Other comprehensive income (loss) before reclassification adjustments	3,376	(41)	(113)	3,222
Reclassification adjustment included in net income (loss)	12,121	—	100	12,221
Other comprehensive income (loss)	15,497	(41)	(13)	15,443
Balance as of December 31, 2015	52,261	458	(1,513)	51,206
Other comprehensive income (loss) before reclassification adjustments	6,579	(70)	830	7,339
Reclassification adjustments included in net income (loss)	(591)	—	98	(493)
Other comprehensive income (loss)	5,988	(70)	928	6,846
Balance as of December 31, 2016	\$ 58,249	\$ 388	\$ (585)	\$ 58,052

The effects of amounts reclassified from accumulated other comprehensive income (loss) to net loss for the years ended December 31, 2016, 2015 and 2014 are presented within the following line items in the consolidated statements of operations (in thousands):

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

	Year Ended December 31,			Consolidated Statements of Operations Line Item
	2016	2015	2014	
Foreign currency translation adjustments				
Loss (gain) on dispositions - continuing operations	\$ (6,265)	\$ (906)	\$ —	Gains on business dispositions
Loss (gain) on country exits - continuing operations	5,674	714	—	Other income (expense), net
Loss (gain) on disposition - discontinued operations	—	12,313	—	Income (loss) from discontinued operations, net of tax
Reclassification adjustments	(591)	12,121	—	
Unrealized gain (loss) on available-for-sale securities				
Other-than-temporary impairment of available-for-sale security	—	—	1,340	Other income (expense), net
Less: Tax effect	—	—	(509)	Provision (benefit) for income taxes
Reclassification adjustment	—	—	831	
Pension adjustments				
Amortization of net actuarial loss (gain)	116	119	—	Selling, general and administrative
Less: Tax effect	(18)	(19)	—	Provision (benefit) for income taxes
Reclassification adjustment	98	100	—	
Total reclassification adjustments	\$ (493)	\$ 12,221	\$ 831	

9. FINANCING ARRANGEMENTS

Convertible Senior Notes

On April 4, 2016, the Company issued \$250.0 million in aggregate principal amount of convertible senior notes (the "Notes") in a private placement to A-G Holdings, L.P. ("Atairos"). The net proceeds from this offering were \$243.2 million after deducting issuance costs. The Notes bear interest at a rate of 3.25% per annum, payable annually in arrears on April 1 of each year, beginning on April 1, 2017. The Notes will mature on April 1, 2022, subject to earlier conversion or redemption.

Each \$1,000 of principal amount of the Notes initially is convertible into 185.1852 shares of Class A common stock, or common stock, as applicable (the "Common Stock"), which is equivalent to an initial conversion price of \$5.40 per share, subject to adjustment upon the occurrence of specified events. Upon conversion, the Company can elect to settle the conversion value in cash, shares of its Common Stock, or any combination of cash and shares of its Common Stock. Holders of the Notes may convert their Notes at their option at any time until the close of business on the scheduled trading day immediately preceding the maturity date. In addition, if specified corporate events occur prior to the maturity date, the Company may be required to increase the conversion rate for holders who elect to convert based on the effective date of such event and the applicable stock price attributable to the event, as set forth in a table contained in the indenture governing the Notes (the "Indenture").

With certain exceptions, upon a fundamental change (as defined in the Indenture), the holders of the Notes may require the Company to repurchase all or a portion of their Notes for cash at a purchase price equal to the principal amount plus accrued and unpaid interest. In addition, the Company may redeem the Notes, at its option, at a purchase price equal to the principal amount plus accrued and unpaid interest on or after April 1, 2020, if the closing sale price of the Common Stock exceeds 150% of the then-current conversion price for 20 or more trading days in the 30 consecutive trading day period preceding the Company's exercise of this redemption right.

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The Notes are senior unsecured obligations of the Company that rank equal in right of payment to all senior unsecured indebtedness of the Company and rank senior in right of payment to any indebtedness that is contractually subordinated to the Notes.

The Indenture includes customary events of default. If an event of default, as defined in the Indenture, occurs and is continuing, the principal amount of the Notes and any accrued and unpaid interest may be declared immediately due and payable. In the case of bankruptcy or insolvency, the principal amount of the Notes and any accrued and unpaid interest would automatically become immediately due and payable.

The Company has separated the Notes into their liability and equity components in the accompanying consolidated balance sheet. The carrying amount of the liability component was calculated by measuring the fair value of a similar liability that does not have an associated conversion feature. The carrying amount of the equity component, representing the conversion option, was determined by deducting the fair value of the liability component from the principal amount of the Notes. The difference between the principal amount of the Notes and the liability component (the "debt discount") is amortized to interest expense based on an effective interest rate of 9.75% over the term of the Notes. The equity component of the Notes is included in additional paid-in capital in the consolidated balance sheet and is not remeasured as long as it continues to meet the conditions for equity classification.

The Company incurred transaction costs of approximately \$6.8 million related to the issuance of the Notes. Those transaction costs have been allocated to the liability and equity components in the same manner as the allocation of the proceeds from the Notes. Transaction costs attributable to the liability component of \$4.8 million were recorded as a debt discount in the consolidated balance sheet and are being amortized to interest expense over the term of the Notes. Transaction costs attributable to the equity component of \$2.0 million were recorded in stockholders' equity as a reduction of the equity component.

The carrying amount of the Notes consisted of the following (in thousands):

	December 31, 2016
Liability component:	
Principal amount	\$ 250,000
Less: debt discount	(71,005)
Net carrying amount of liability component	\$ 178,995
Net carrying amount of equity component	\$ 67,014

The estimated fair value of the Notes as of December 31, 2016 was \$237.4 million and was determined using a lattice model. The Company classified the fair value of the Notes as a Level 3 measurement due to the lack of observable market data over fair value inputs such as its stock price volatility over the term of the Notes and its cost of debt.

As of December 31, 2016, the remaining term of the Notes is approximately 5 years, 3 months. During the year ended December 31, 2016, the Company recognized interest expense on the Notes as follows (in thousands):

	Year Ended December 31, 2016
Contractual interest expense based on 3.25% of the principal amount per annum	\$ 6,095
Amortization of debt discount	7,376
Total interest expense	\$ 13,471

Note Hedges and Warrants

On May 9, 2016, the Company purchased convertible note hedges with respect to its Common Stock for a cost of \$59.1 million from certain bank counterparties. The convertible note hedges provide the Company with the right to purchase up to 46.3 million shares of the Company's Common Stock at an initial strike price of \$5.40 per share, which corresponds to the initial conversion price of the Notes, and are exercisable by the Company upon conversion of the Notes. The convertible note hedges are intended to reduce the potential economic dilution upon conversion of the Notes. The convertible note hedges are separate

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

transactions and are not part of the terms of the Notes. Holders of the Notes do not have any rights with respect to the convertible note hedges.

On May 9, 2016, the Company also sold warrants for total cash proceeds of \$35.5 million to certain bank counterparties. The warrants provide the counterparties with the right to purchase up to 46.3 million shares of the Company's Common Stock at a strike price of \$8.50 per share. The warrants expire on various dates between July 1, 2022 and August 26, 2022 and are exercisable on their expiration dates. The warrants are separate transactions and are not part of the terms of the Notes or convertible note hedges. Holders of the Notes and convertible note hedges do not have any rights with respect to the warrants.

The amounts paid and received for the convertible note hedges and warrants have been recorded in additional paid-in capital in the consolidated balance sheet as of December 31, 2016. The convertible note hedges and warrants are not remeasured as long as they continue to meet the conditions for equity classification. The amounts paid for the convertible note hedges are tax deductible over the term of the Notes, while the proceeds received from the warrants are not taxable.

Under the if-converted method, the shares of common stock underlying the conversion option in the Notes are included in the diluted earnings per share denominator and the interest expense on the Notes, net of tax, is added to the numerator. However, upon conversion, there will be no economic dilution from the Notes, as exercise of the convertible note hedges eliminates any dilution from the Notes that would have otherwise occurred when the price of the Company's Common Stock exceeds the conversion price. Taken together, the purchase of the convertible note hedges and sale of warrants are intended to offset any actual dilution from the conversion of these Notes and to effectively increase the overall conversion price from \$5.40 to \$8.50 per share. Based on the closing price of the Company's Common Stock of \$3.32 on December 31, 2016, the if-converted value of the Notes was less than the principal amount.

Revolving Credit Agreement

In June 2016, the Company amended and restated its senior secured revolving credit agreement (as amended, the "Amended and Restated Credit Agreement") that provides for aggregate principal borrowings of up to \$250.0 million and matures in June 2019. Borrowings under the Amended and Restated Credit Agreement bear interest, at the Company's option, at a rate per annum equal to the Alternate Base Rate or Adjusted LIBO Rate (each as defined in the Amended and Restated Credit Agreement) plus an additional margin ranging between 0.50% and 2.25%. The Company is required to pay quarterly commitment fees ranging from 0.25% to 0.40% per annum of the average daily amount of unused commitments available under the Amended and Restated Credit Agreement. The Amended and Restated Credit Agreement also provides for the issuance of up to \$45.0 million in letters of credit, provided that the sum of outstanding borrowings and letters of credit do not exceed the maximum funding commitment of \$250.0 million.

The Amended and Restated Credit Agreement is secured by substantially all of the Company's and its subsidiaries' tangible and intangible assets, including a pledge of 100% of the outstanding capital stock of substantially all of its direct and indirect domestic subsidiaries and 65% of the shares or equity interests of first-tier foreign subsidiaries and each U.S. entity whose assets substantially consist of capital stock and/or intercompany debt of one or more foreign subsidiaries, subject to certain exceptions. Certain of the Company's domestic subsidiaries are guarantors under the Amended and Restated Credit Agreement.

The Amended and Restated Credit Agreement contains various customary restrictive covenants that limit the Company's ability to, among other things: incur additional indebtedness; make dividend and other restricted payments, including share repurchases; enter into sale and leaseback transactions; make investments, loans or advances; grant or incur liens on assets; sell assets; engage in mergers, consolidations, liquidations or dissolutions; and engage in transactions with affiliates. The Amended and Restated Credit Agreement requires the Company to maintain compliance with specified financial covenants, comprised of a minimum fixed charge coverage ratio, a maximum leverage ratio, a maximum senior secured indebtedness ratio and a minimum liquidity ratio, each as set forth in the Amended and Restated Credit Agreement. The Company is also required to maintain, as of the last day of each fiscal quarter, unrestricted cash of at least \$400.0 million, including \$200.0 million in accounts held with lenders under the Amended and Restated Credit Agreement or their affiliates. Non-compliance with these covenants may result in termination of the commitments under the Amended and Restated Credit Agreement and any then outstanding borrowings may be declared due and payable immediately. The Company has the right to terminate the Amended and Restated Credit Agreement or reduce the available commitments at any time.

As of December 31, 2016 and 2015, the Company had no borrowings under the Amended and Restated Credit Agreement or its prior credit agreement, respectively, and was in compliance with all covenants. As of December 31, 2016 and 2015, the Company had outstanding letters of credit of \$11.1 million and \$11.6 million, respectively, under the Amended and Restated Credit Agreement and its prior credit agreement.

10. COMMITMENTS AND CONTINGENCIES

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Leases

The Company has entered into various non-cancelable operating lease agreements for its offices and data centers throughout the world with lease expirations between 2017 and 2026. Rent expense under operating leases was \$50.1 million, \$49.2 million and \$51.2 million for the years ended December 31, 2016, 2015 and 2014, respectively. Sublease income was \$2.7 million, \$1.0 million and \$0.1 million for the years ended December 31, 2016, 2015 and 2014, respectively.

The Company leases its headquarters located in Chicago, Illinois ("600 West Chicago"). The Company's lease agreement for 600 West Chicago extends through January 31, 2026 and includes rent escalations that range from one to two percent per year, as well as expansion options and a five-year renewal option. The 600 West Chicago lease represents \$107.0 million of the estimated future payments under operating leases shown in the table below. The Company accounts for the 600 West Chicago lease as an operating lease and recognizes rent expense on a straight-line basis, taking into account rent escalations and lease incentives.

Certain of the Company's computer hardware has been acquired under capital lease agreements, with expirations between 2017 and 2019.

The Company is responsible for paying its proportionate share of specified operating expenses and real estate, personal property and lease taxes under certain of its operating and capital leases agreements. Those operating expenses are not included in the table below.

As of December 31, 2016, the future payments under operating leases and capital leases for each of the next five years and thereafter are as follows (in thousands):

	Capital Leases	Operating Leases
2017	\$ 29,982	\$ 48,693
2018	16,011	39,535
2019	3,779	27,651
2020	—	23,900
2021	—	20,234
Thereafter	—	68,093
Total minimum lease payments	49,772	\$ 228,106
Less: Amount representing interest	(1,164)	
Present value of net minimum capital lease payments	48,608	
Less: Current portion of capital lease obligations	(28,889)	
Total long-term capital lease obligations	\$ 19,719	

As of December 31, 2016, the future amounts due to the Company under subleases for each of the next five years and thereafter is as follows (in thousands):

	Subleases ⁽¹⁾
2017	\$ 5,796
2018	5,688
2019	4,864
2020	4,473
2021	3,682
Thereafter	4,933
Total future sublease income	\$ 29,436

- (1) On December 28, 2016, the Company entered into a sublease for portions of its office space in Chicago, Illinois that extends through January 31, 2026. The income from this sublease, which totals approximately \$17.9 million, is excluded from the table above because the sublease is subject to landlord consents not received as of December 31, 2016. See *Note 19, Related Party Transaction*, for information about this sublease.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Purchase Obligations

The Company has entered into non-cancelable arrangements with third-parties, primarily related to information technology products and services. As of December 31, 2016, future payments under these contractual obligations were as follows (in thousands):

2017	\$	17,535
2018		9,310
2019		2,500
2020		45
2021		45
Thereafter		—
Total purchase obligations	\$	29,435

Legal Matters and Other Contingencies

From time to time, the Company is party to various legal proceedings incident to the operation of its business. For example, the Company is currently involved in proceedings brought by former employees and merchants, intellectual property infringement suits and suits by customers (individually or as class actions) alleging, among other things, violations of the Credit Card Accountability, Responsibility and Disclosure Act and state laws governing gift cards, stored value cards and coupons. The following is a brief description of significant legal proceedings.

The Company was a defendant in a proceeding pursuant to which, on October 29, 2012, a consolidated amended class action complaint was filed against the Company, certain of its directors and officers, and the underwriters that participated in the initial public offering of the Company's Class A common stock. The case was pending before the United States District Court for the Northern District of Illinois: *In re Groupon, Inc. Securities Litigation*. In the first quarter of 2016, the parties entered into a term sheet to settle the litigation that provides for a settlement payment to the class of \$45.0 million in cash, including plaintiff's attorneys' fees, in exchange for a full and final release and also includes a denial of liability or any wrongdoing by the Company and the other defendants. On April 7, 2016, the Court entered an order preliminarily approving the settlement. On April 21, 2016, a \$45.0 million settlement payment was made into an escrow account. On July 13, 2016, the Court entered an order providing final approval of the settlement and final judgment, dismissing the action with prejudice. The Company derecognized its liability for the matter and its related asset for the amount previously funded into the escrow account at that time.

Federal and state purported stockholder derivative lawsuits have been filed against certain of the Company's current and former directors and officers. The federal purported stockholder derivative lawsuit was originally filed in April 2012, and a consolidated stockholder derivative complaint, filed on July 30, 2012, is currently pending in the United States District Court for the Northern District of Illinois: *In re Groupon Derivative Litigation*. The state derivative cases are currently pending before the Chancery Division of the Circuit Court of Cook County, Illinois: *Orrego v. Lefkowsky, et al.*, was filed on April 5, 2012; and *Kim v. Lefkowsky, et al.*, was filed on May 25, 2012. In the first quarter of 2016, the parties reached an agreement in principle to settle the litigation. The agreement, which is subject to court approval, provides that the Company will implement certain corporate reforms. On January 9, 2017, the state court entered an order preliminarily approving the settlement, and set a final settlement approval hearing for April 5, 2017. If final approval is given and judgment entered, it will resolve both the state and federal derivative lawsuits.

In 2010, the Company was named as a defendant in a series of class actions that were consolidated in the U.S. District Court for the Southern District of California. The consolidated actions are referred to as *In re Groupon Marketing and Sales Practices Litigation*. In July 2015, the parties reached an agreement in principle regarding a settlement involving a combination of cash and Groupon credits, worth a total of \$8.5 million. On March 23, 2016, the district court granted final approval of the settlement over various objections posed by two individuals and entered judgment pursuant to the settlement. In April 2016, the two individuals who had objected filed notices of appeal with the Ninth Circuit Court of Appeals. One appeal challenged the district court's approval of the class action settlement; the other appeal challenged the district court's denial of the objector's request for an award of attorney's fees. The appeal challenging the approval of the settlement was dismissed on June 23, 2016, and the

GROUPON, INC.
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settlement became final and non-appealable as of that date. The case was dismissed with prejudice and settlement claims are being validated and processed.

On March 2, 2016, International Business Machines Corporation ("IBM") filed a complaint in the United States District Court for the District of Delaware against the Company. In the complaint, IBM alleges that the Company has infringed and continues to willfully infringe certain IBM patents that IBM claims relate to the presentation of applications and advertising in an interactive service, preserving state information in online transactions and single sign-on processes in a computing environment and seeks unspecified damages (including a request that the amount of compensatory damages be trebled), injunctive relief and costs and reasonable attorneys' fees. On December 13, 2016, the Company filed a motion to invalidate two of IBM's patents relating to the presentation of applications and advertising on the grounds that such patents are patent-ineligible, and the court has not yet ruled on that motion. On May 9, 2016, the Company filed a complaint in the United States District Court for the Northern District of Illinois against IBM. The Company alleges that IBM has infringed and continues to willfully infringe one of the Company's patents relating to location-based services. On December 20, 2016, IBM filed a motion to dismiss this case, and the court denied that motion. The Company intends to seek damages and injunctive relief for IBM's infringement of this patent. Further, the Company plans to vigorously defend against the claims filed by IBM.

In addition, other third parties have from time to time claimed, and others may claim in the future, that the Company has infringed their intellectual property rights. The Company is subject to intellectual property disputes, including patent infringement claims, and expects that it will increasingly be subject to intellectual property infringement claims as its services expand in scope and complexity. The Company has in the past litigated such claims, and the Company is presently involved in several patent infringement and other intellectual property-related claims, including pending litigation or trademark disputes, some of which could involve potentially substantial claims for damages. The Company may also become more vulnerable to third-party claims as laws such as the Digital Millennium Copyright Act are interpreted by the courts, and as the Company becomes subject to laws in jurisdictions where the underlying laws with respect to the potential liability of online intermediaries are either unclear or less favorable. The Company believes that additional lawsuits alleging that it has violated patent, copyright or trademark laws will be filed against it. Intellectual property claims, whether meritorious or not, are time consuming and costly to resolve, could require expensive changes in the Company's methods of doing business, or could require it to enter into costly royalty or licensing agreements.

The Company is also subject to, or in the future may become subject to, a variety of regulatory inquiries across the jurisdictions where the Company conducts its business, including, for example, inquiries related to consumer protection, employment matters and/or hiring practices, marketing practices, tax, unclaimed property and privacy rules and regulations. Any regulatory actions against the Company, whether meritorious or not, could be time consuming, result in costly litigation, damage awards, injunctive relief or increased costs of doing business through adverse judgment or settlement, require the Company to change its business practices in expensive ways, require significant amounts of management time, result in the diversion of significant operational resources or otherwise harm the Company's business.

The Company establishes an accrued liability for loss contingencies related to legal and regulatory matters when the loss is both probable and estimable. These accruals represent management's best estimate of probable losses and, in such cases, there may be an exposure to loss in excess of the amounts accrued. For certain of the matters described above, there are inherent and significant uncertainties based on, among other factors, the stage of the proceedings, developments in the applicable facts of law, or the lack of a specific damage claim. However, the Company believes that the amount of reasonably possible losses in excess of the amounts accrued for these matters would not have a material adverse effect on its business, consolidated financial position, results of operations or cash flows. The Company's accrued liabilities for loss contingencies related to legal and regulatory matters may change in the future as a result of new developments, including, but not limited to, the occurrence of new legal matters, changes in the law or regulatory environment, adverse or favorable rulings, newly discovered facts relevant to the matter, or changes in the strategy for the matter. Regardless of the outcome, litigation can have an adverse impact on the Company because of defense and settlement costs, diversion of management resources and other factors.

Indemnifications

In the normal course of business to facilitate transactions related to its operations, the Company indemnifies certain parties, including employees, lessors, service providers, merchants, and counterparties to investment agreements and asset and stock purchase agreements with respect to various matters. The Company has agreed to hold certain parties harmless against losses arising from a breach of representations or covenants, or other claims made against those parties. These agreements may limit the time within which an indemnification claim can be made and the amount of the claim. The Company is also subject to increased exposure to various claims as a result of its divestitures and acquisitions, particularly in cases where the Company is entering into new businesses in connection with such acquisitions. The Company may also become more vulnerable to claims as it expands the range and scope of its services and is subject to laws in jurisdictions where the underlying laws with respect to potential liability are either unclear or less favorable. In addition, the Company has entered into indemnification agreements with its officers, directors and underwriters, and the Company's bylaws contain similar indemnification obligations that cover officers, directors, employees and other agents.

It is not possible to determine the maximum potential amount under these indemnification agreements due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each particular agreement. Historically, any payments that the Company has made under these agreements have not had a material impact on the operating results, financial position or cash flows of the Company.

11. STOCKHOLDERS' EQUITY**Preferred Stock**

The Company's Board of Directors ("the Board") has the authority, without approval by the stockholders, to issue up to a total of 50,000,000 shares of preferred stock in one or more series. The Board may establish the number of shares to be included in each such series and may fix the designations, preferences, powers and other rights of the shares of a series of preferred stock. The Board could authorize the issuance of preferred stock with voting or conversion rights that could dilute the voting power or rights of the holders of its common stock. As of December 31, 2016 and 2015, there were no shares of preferred stock outstanding.

Common Stock

Prior to October 31, 2016, the Company's certificate of incorporation, as amended and restated, authorized three classes of common stock: Class A common stock, Class B common stock and common stock. On October 31, 2016, each share of the Company's Class A common stock and Class B common stock automatically converted into a single class of common stock pursuant to the terms of the Company's sixth amended and restated certificate of incorporation. Upon conversion, all shares of Class A common stock and Class B common stock were retired.

Pursuant to the Company's restated certificate of incorporation, the Board has the authority to issue up to a total of 2,010,000,000 shares of common stock. Each holder of common stock shall be entitled to one vote for each such share on any matter that is submitted to a vote of stockholders. In addition, holders of the common stock will vote as a single class of stock on any matter that is submitted to a vote of stockholders.

Prior to October 31, 2016, holders of Class A common stock and Class B common stock had identical rights, except that holders of Class A common stock were entitled to one vote per share and holders of Class B common stock were entitled to 150 votes per share.

Share Repurchase Program

The Board has authorized the Company to repurchase up to \$700.0 million of its common stock through April 2018 under its current share repurchase program. During the year ended December 31, 2016, the Company purchased 43,227,743 shares for an aggregate purchase price of \$162.4 million (including fees and commissions) under that repurchase program. As of December 31, 2016, up to \$195.0 million of common stock remained available for purchase under that program. The timing and amount of any share repurchases are determined based on market conditions, share price and other factors, and the program may be discontinued or suspended at any time.

12. COMPENSATION ARRANGEMENTS**Groupon, Inc. Stock Plans**

In January 2008, the Company adopted the 2008 Stock Option Plan, as amended (the "2008 Plan"), under which options for up to 64,618,500 shares of common stock were authorized to be issued to employees, consultants and directors of the Company. The 2008 Plan was frozen in December 2010. In April 2010, the Company established the Groupon, Inc. 2010 Stock Plan, as amended in April 2011 (the "2010 Plan"), under which options and restricted stock units ("RSUs") for up to 20,000,000 shares of common stock were authorized for future issuance to employees, consultants and directors of the Company. No new awards may be granted under the 2010 Plan following the Company's initial public offering in November 2011. In August 2011, the Company established the Groupon, Inc. 2011 Stock Plan (the "2011 Plan"), as amended in November 2013, May 2014 and June 2016, under which options, RSUs and performance stock units for up to 150,000,000 shares of common stock were authorized for future issuance to employees, consultants and directors of the Company.

The Groupon, Inc. Stock Plans described above (the "Plans") are administered by the Compensation Committee of the Board, which determines the number of awards to be issued, the corresponding vesting schedule and the exercise price for options. As of December 31, 2016, 79,487,111 shares were available for future issuance under the Plans. Prior to January 2008, the Company issued stock options and RSUs that are governed by employment agreements, some of which are still outstanding.

The Company recognized stock-based compensation expense from continuing operations of \$118.2 million, \$142.1 million and \$115.3 million for the years ended December 31, 2016, 2015 and 2014, respectively, related to stock awards issued under the Plans and acquisition-related awards. The Company recognized stock-based compensation expense from discontinued operations of \$5.3 million and \$6.7 million for the years ended December 31, 2015 and 2014. The Company also capitalized \$9.3 million, \$12.2 million and \$11.2 million of stock-based compensation for the years ended December 31, 2016, 2015 and 2014, respectively, in connection with internally-developed software.

As of December 31, 2016, a total of \$104.9 million of unrecognized compensation costs related to unvested stock awards and unvested acquisition-related awards are expected to be recognized over a remaining weighted-average period of 1.02 years.

Employee Stock Purchase Plan

The Company is authorized to grant up to 10,000,000 shares of common stock under its employee stock purchase plan ("ESPP"). For the years ended December 31, 2016, 2015 and 2014, 1,669,782, 1,037,198 and 857,171 shares of common stock were issued under the ESPP, respectively.

Stock Options

The exercise price of stock options granted is equal to the fair value of the underlying stock on the date of grant. The contractual term for stock options expires ten years from the grant date. Stock options generally vested over a three or four-year period, with 25% of the awards vesting after one year and the remainder of the awards vesting on a monthly or quarterly basis thereafter.

The table below summarizes the stock option activity for the year ended December 31, 2016:

	Options	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands) ⁽¹⁾
Outstanding at December 31, 2015	1,584,832	\$ 0.95	3.96	\$ 3,360
Exercised	(491,483)	\$ 1.26		
Forfeited	(102,177)	\$ 0.88		
Outstanding and exercisable at December 31, 2016	991,172	\$ 0.77	2.83	\$ 2,527

(1) The aggregate intrinsic value of options outstanding and exercisable represents the total pretax intrinsic value (the difference between the fair value of the Company's stock on the last day of each period and the exercise price, multiplied by the number of options where the fair value

Groupon, Inc.
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exceeds the exercise price) that would have been received by the option holders had all option holders exercised their options as of December 31, 2016 and 2015, respectively.

The Company did not grant any stock options during the years ended December 31, 2016, 2015 and 2014. The total intrinsic value of options that were exercised during the years ended December 31, 2016, 2015 and 2014 was \$1.2 million, \$3.0 million and \$6.5 million, respectively.

Restricted Stock Units

The restricted stock units granted under the Plans generally have vesting periods between one and four years. The table below summarizes activity regarding unvested restricted stock units under the Plans for the year ended December 31, 2016:

	Restricted Stock Units	Weighted- Average Grant Date Fair Value (per share)
Unvested at December 31, 2015	39,143,509	\$ 6.53
Granted	20,046,195	\$ 3.93
Vested	(22,698,324)	\$ 5.91
Forfeited	(11,083,534)	\$ 6.22
Unvested at December 31, 2016	25,407,846	\$ 5.18

The weighted-average grant date fair value of restricted stock units granted in 2015 and 2014 was \$6.01 and \$7.59, respectively. The fair value of restricted stock units that vested during each of the three years ended December 31, 2016, 2015 and 2014 was \$ 88.2 million, \$163.4 million and \$139.8 million, respectively.

In May 2015, 575,744 restricted stock units previously granted to Ticket Monster employees were modified to permit continued vesting following the Company's sale of its controlling stake in Ticket Monster. These nonemployee restricted stock units, which require ongoing employment with Ticket Monster to vest, are remeasured to fair value each reporting period. As of December 31, 2016, 139,852 of those nonemployee restricted stock units are outstanding.

Performance Share Units

During the year ended December 31, 2016, the Company granted performance share units to certain key employees. The vesting of those awards into shares of the Company's common stock was contingent upon the achievement of specified financial and operational targets for the year ended December 31, 2016 and was subject to both continued employment through the performance period and approval by the Board that the specified financial and operational targets had been achieved. The maximum number of common shares issuable upon vesting of those performance share units was 778,092 shares. Based on the Company's financial and operational results for the year ended December 31, 2016, 503,735 shares became issuable upon vesting of the performance share units following the Board's approval on February 14, 2017.

Restricted Stock Awards

The Company has granted restricted stock awards in connection with business combinations. Compensation expense on these awards is recognized on a straight-line basis over the requisite service periods, which extend through January 2018.

The table below summarizes activity regarding unvested restricted stock for the year ended December 31, 2016:

	Restricted Stock Awards	Weighted- Average Grant Date Fair Value (per share)
Unvested at December 31, 2015	1,908,408	\$ 5.72
Vested	(492,422)	\$ 7.42
Forfeited	(196,968)	\$ 7.42
Unvested at December 31, 2016	1,219,018	\$ 4.76

GROUPON, INC.
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The fair value of restricted stock that vested during the years ended December 31, 2016, 2015 and 2014 was \$2.2 million, \$2.6 million and \$0.7 million, respectively.

Swiss Pension Plan

The Company maintains a pension plan covering employees in Switzerland pursuant to the requirements of Swiss pension law. Contributions to the Swiss pension plan are paid by the employees and the employer. Certain features of the plan require it to be categorized as a defined benefit plan under U.S. GAAP. These features include a minimum interest guarantee on retirement savings accounts, a predetermined factor for converting accumulated savings account balances into a pension, and death and disability benefits. The projected benefit obligation and net unfunded pension liability were \$4.8 million and \$2.1 million, respectively, as of December 31, 2016 and \$5.9 million and \$2.7 million, respectively, as of December 31, 2015. The net periodic pension cost for the years ended December 31, 2016, 2015 and 2014 was \$1.1 million, \$1.2 million and \$0.6 million, respectively.

13. RESTRUCTURING

In September 2015, the Company commenced a restructuring plan relating primarily to workforce reductions in its international operations. The Company has also undertaken workforce reductions in its North America segment. In addition to workforce reductions in its ongoing markets, the Company has ceased operations in six countries within its Rest of World segment and 12 countries within its EMEA segment as part of the restructuring plan, including five countries within its EMEA segment that were exited during the year ended December 31, 2016. The total revenue and net loss for the countries subsequently exited under the restructuring plan were \$14.4 million and \$8.5 million, respectively, for the year ended December 31, 2016. The total revenue and net loss for the countries subsequently exited under the restructuring plan were \$64.3 million and \$10.1 million, respectively, for the year ended December 31, 2015. Costs related to the restructuring plan are classified as "Restructuring charges" on the consolidated statements of operations.

From the inception of its restructuring plan in September 2015 through December 31, 2016, the Company has incurred cumulative costs for employee severance and benefits and other exit costs of \$65.5 million under the plan. In addition to those costs, the Company has incurred cumulative long-lived asset impairment charges of \$7.7 million resulting from its restructuring activities. Management continues to explore potential further restructuring actions in connection with its efforts to optimize the Company's cost structure, which are expected to be substantially completed by June 2017.

The following table summarizes the costs incurred by segment related to the Company's restructuring plan for the year ended December 31, 2016 (in thousands):

	Year Ended December 31, 2016			
	Employee Severance and Benefit Costs ⁽¹⁾	Asset Impairments ⁽²⁾	Other Exit Costs	Total Restructuring Charges
North America	\$ 8,548	\$ 45	\$ 3,304	\$ 11,897
EMEA	22,593	376	2,376	25,345
Rest of World	5,719	—	647	6,366
Consolidated	\$ 36,860	\$ 421	\$ 6,327	\$ 43,608

(1) The employee severance and benefit costs for the year ended December 31, 2016 relates to the termination of approximately 1,200 employees. Substantially all of the remaining cash payments for those costs are expected to be disbursed through December 31, 2017.

(2) Asset impairments relate to property, equipment and software that were determined to be impaired as a result of the Company's restructuring activities.

The following table summarizes the costs incurred by segment related to the Company's restructuring plan for the year ended December 31, 2015 (in thousands):

	Year Ended December 31, 2015			
	Employee Severance and Benefit Costs ⁽¹⁾	Asset Impairments ⁽²⁾	Other Exit Costs	Total Restructuring Charges
North America	\$ 2,000	\$ 6,740	\$ 1,755	\$ 10,495
EMEA	15,060	223	829	16,112
Rest of World	1,950	304	707	2,961
Consolidated	\$ 19,010	\$ 7,267	\$ 3,291	\$ 29,568

- (1) The employee severance and benefit costs for the year ended December 31, 2015 related to the termination of approximately 1,000 employees.
- (2) Asset impairments related to property, equipment and software that were determined to be impaired as a result of the Company's restructuring activities.

The following table summarizes restructuring liability activity for the year ended December 31, 2016 (in thousands):

	Employee Severance and Benefit Costs	Other Exit Costs	Total
Balance as of December 31, 2014	\$ —	\$ —	—
Charges payable in cash	19,010	3,291	22,301
Cash Payments	(9,408)	(755)	(10,163)
Foreign currency translation	(585)	3	(582)
Balance as of December 31, 2015	\$ 9,017	\$ 2,539	\$ 11,556
Charges payable in cash ⁽¹⁾	32,211	6,327	38,538
Cash payments	(25,922)	(6,574)	(32,496)
Foreign currency translation	(401)	(4)	(405)
Balance as of December 31, 2016	\$ 14,905	\$ 2,288	\$ 17,193

- (1) Excludes stock-based compensation of \$4.7 million related to accelerated vesting of stock-based compensation awards for certain employees terminated as a result of the Company's restructuring activities for the year ended December 31, 2016.

14. INCOME TAXES

The components of pretax income (loss) from continuing operations for the years ended December 31, 2016, 2015 and 2014 were as follows (in thousands):

	Year Ended December 31,		
	2016	2015	2014
United States	\$ (122,333)	\$ (100,445)	\$ (20,057)
International	(63,537)	(7,871)	17,308
Income (loss) before provision (benefit) for income taxes	\$ (185,870)	\$ (108,316)	\$ (2,749)

The provision (benefit) for income taxes for the years ended December 31, 2016, 2015 and 2014 was allocated between continuing operations and discontinued operations as follows (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Continuing Operations	\$ (2,547)	\$ (19,145)	\$ 15,724
Discontinued Operations	—	48,028	—
Total	\$ (2,547)	\$ 28,883	\$ 15,724

The pretax income from discontinued operations, including the pretax gain resulting from the sale of a controlling stake in Ticket Monster, was considered for purposes of allocating tax benefits to the loss from continuing operations for the year ended

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December 31, 2015.

The provision (benefit) for income taxes from continuing operations for the years ended December 31, 2016, 2015 and 2014 consisted of the following components (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Current taxes:			
U.S. federal	\$ (1,093)	\$ (23,913)	\$ (3,518)
State	912	(2,613)	69
International	8,255	16,366	30,297
Total current taxes	8,074	(10,160)	26,848
Deferred taxes:			
U.S. federal	(4,262)	(8,936)	(5,132)
State	(11)	4,324	(742)
International	(6,348)	(4,373)	(5,250)
Total deferred taxes	(10,621)	(8,985)	(11,124)
Provision (benefit) for income taxes	\$ (2,547)	\$ (19,145)	\$ 15,724

The items accounting for differences between the income tax provision (benefit) from continuing operations computed at the U.S. federal statutory rate and the provision (benefit) for income taxes for the years ended December 31, 2016, 2015 and 2014 were as follows (in thousands):

	Year Ended December 31,		
	2016	2015	2014
U.S. federal income tax provision (benefit) at statutory rate	\$ (65,055)	\$ (37,911)	\$ (962)
Foreign income and losses taxed at different rates ⁽¹⁾	11,256	3,226	(5,416)
State income taxes, net of federal benefits, and state tax credits	(4,694)	(16,382)	(12,851)
Change in valuation allowances	16,184	48,215	19,094
Effect of foreign and state rate changes on deferred items	7,135	(117)	178
Tax effects of intercompany transactions	853	12,448	25,081
Adjustments related to uncertain tax positions	(4,899)	(14,877)	(12,334)
Non-deductible stock-based compensation expense	7,291	5,408	4,256
Tax shortfalls, net of excess tax benefits, on stock-based compensation awards ⁽²⁾	12,585	—	—
Non-deductible (or non-taxable) change in fair value of investment	4,484	(334)	—
Federal research and development credits	(8,547)	(14,636)	(4,430)
Taxable forgiveness of intercompany liabilities	15,187	—	—
Deductions for investments in subsidiaries that have ceased operations	(645)	(4,924)	—
Non-taxable gains on business dispositions	(3,481)	(5,070)	—
Non-deductible or non-taxable items	9,799	5,809	3,108
Provision (benefit) for income taxes	\$ (2,547)	\$ (19,145)	\$ 15,724

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

- (1) Tax rates in foreign jurisdictions are generally lower than the U.S. federal statutory rate. This results in a decrease to the benefit for income taxes in this rate reconciliation for the years ended December 31, 2016 and 2015, prior to the impact of valuation allowances, due to the net pretax losses from continuing operations in those foreign jurisdictions.
- (2) The Company adopted the guidance in ASU 2016-09 on January 1, 2016. Under that guidance, all income tax effects related to settlements of share-based payment awards are reported in earnings as an increase or decrease to income tax expense (benefit), net. See Note 2, *Summary of Significant Accounting Policies*, for more information about ASU 2016-09.

The deferred income tax assets and liabilities consisted of the following components as of December 31, 2016 and 2015 (in thousands):

	December 31,	
	2016	2015
Deferred tax assets:		
Accrued expenses and other liabilities	\$ 50,723	\$ 52,250
Stock-based compensation	7,320	8,328
Net operating loss and tax credit carryforwards	219,584	207,581
Intangible assets, net	11,833	17,758
Investments	1,080	—
Unrealized foreign currency exchange losses	9,922	7,761
Other	1,155	2,080
Total deferred tax assets	301,617	295,758
Less valuation allowances	(248,270)	(230,288)
Deferred tax assets, net of valuation allowance	53,347	65,470
Deferred tax liabilities:		
Investments	—	(13,782)
Prepaid expenses and other assets	(10,402)	(1,881)
Property, equipment and software, net	(22,397)	(29,664)
Convertible senior notes	(4,529)	—
Deferred revenue	(15,003)	(25,301)
Total deferred tax liabilities	(52,331)	(70,628)
Net deferred tax asset (liability)	\$ 1,016	\$ (5,158)

The Company has incurred significant losses in recent periods and had an accumulated deficit of \$1,099.0 million as of December 31, 2016. As a result, the Company maintained valuation allowances against its domestic deferred tax assets and substantially all of its foreign deferred tax assets as of December 31, 2016 and 2015 to reduce their carrying values to amounts that are realizable either through future reversals of existing taxable temporary differences or through taxable income in carryback years for the applicable jurisdictions.

A cumulative loss in the most recent three-year period is a significant piece of negative evidence that is difficult to overcome when assessing the realizability of deferred tax assets. Prior to 2016, the Company's operations in the United States were in a cumulative income position over the preceding three-year period. However, due to the Company's strategic decision in late 2015 to significantly increase marketing spend to accelerate customer growth, the Company forecasted that those operations would be in a three-year cumulative loss position by the end of 2016. Based on that forecasted cumulative three-year pretax loss and its recent financial performance, the Company recorded a valuation allowance against its net deferred tax assets in the United States as of December 31, 2015, which resulted in a \$26.0 million charge to income tax expense for the year then ended.

The Company had \$164.1 million of federal and \$893.5 million of state net operating loss carryforwards as of December 31, 2016, which will begin expiring in 2027 and 2017, respectively. As of December 31, 2016, the Company had \$478.5 million of foreign net operating loss carryforwards, a significant portion of which carry forward for an indefinite period.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The Company is subject to taxation in the United States, state jurisdictions and foreign jurisdictions. Significant judgment is required in determining the worldwide provision for income taxes and recording the related income tax assets and liabilities. The Company recognizes the financial statement benefit of a tax position only after determining that the relevant tax authority would more-likely-than-not sustain the position following an audit. For tax positions meeting the more-likely-than-not criterion, the amount recognized in the financial statements is the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate settlement with the relevant tax authority.

The following table summarizes activity related to the Company's gross unrecognized tax benefits, excluding interest and penalties, for the years ended December 31, 2016, 2015 and 2014 (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Beginning Balance	\$ 79,637	\$ 98,321	\$ 110,305
Increases related to prior year tax positions	1,708	—	5,489
Decreases related to prior year tax positions	(3,154)	(25,702)	(27,875)
Increases related to current year tax positions	11,443	10,590	17,348
Decreases based on settlements with taxing authorities	(3,176)	—	—
Decreases due to lapse of statute limitations	(4,906)	—	—
Foreign currency translation	(1,471)	(3,572)	(6,946)
Ending Balance	\$ 80,081	\$ 79,637	\$ 98,321

The total amount of unrecognized tax benefits as of December 31, 2016, 2015 and 2014 that, if recognized, would affect the effective tax rate are \$34.5 million, \$40.8 million and \$72.3 million, respectively.

The Company recognized \$1.2 million, \$0.1 million and \$1.1 million of interest and penalties within "Provision for income taxes" on its consolidated statements of operations for the years ended December 31, 2016, 2015 and 2014, respectively. Total accrued interest and penalties as of December 31, 2016 and 2015 were \$4.6 million and \$5.8 million, respectively, and are included within "Other non-current liabilities" in the consolidated balance sheets.

The Company is currently under IRS audit for the 2013 and 2014 tax years. Additionally, the Company is currently under audit by several foreign jurisdictions. It is likely that the examination phase of some of these audits will conclude in the next 12 months. There are many factors, including factors outside of the Company's control, which influence the progress and completion of these audits. The Company recognized income tax benefits of \$8.4 million, \$25.6 million and \$24.4 million for the years ended December 31, 2016, 2015 and 2014, respectively, as a result of new information that impacted its estimates of the amounts that are more-likely-than not of being realized upon settlement of the related tax positions and due to expirations of the applicable statutes of limitations. As of December 31, 2016, the Company believes that it is reasonably possible that additional changes of up to \$36.6 million in unrecognized tax benefits may occur within the next 12 months upon closing of income tax audits or the expiration of applicable statutes of limitations.

In general, it is the practice and intention of the Company to reinvest the earnings of its non-U.S. subsidiaries in those operations. As of December 31, 2016, no provision has been made for U.S. income taxes and foreign withholding taxes related to the undistributed earnings of the Company's foreign subsidiaries of approximately \$241.9 million, because those undistributed earnings are indefinitely reinvested outside the United States. The actual U.S. tax cost would depend on income tax laws and circumstances at the time of distribution. Determination of the amount of unrecognized U.S. deferred tax liability related to the undistributed earnings of the Company's foreign subsidiaries is not practical due to the complexities associated with the calculation.

15. VARIABLE INTEREST ENTITY

In 2011, the Company entered into an arrangement with a strategic partner to offer deals related to live events, and a limited liability company ("LLC") was established to administer that arrangement. The Company and the strategic partner each own 50% of the outstanding LLC interests and income and cash flows of the LLC are allocated based on agreed upon percentages specified in the related LLC agreement.

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The Company's obligations associated with its interests in the LLC are primarily administering transactions, contributing intellectual property, identifying deals and promoting the sale of deal offerings, coordinating the distribution of deal offerings and providing the record keeping.

Under the LLC agreement, as amended, the LLC shall be dissolved upon the occurrence of any of the following events: (1) either party becoming a majority owner; (2) July 11, 2019; (3) certain elections of the Company or the strategic partner based on the operational performance of the LLC or other changes to certain terms in the agreement; (4) election of either the Company or the strategic partner in the event of bankruptcy by the other party; (5) sale of the LLC; or (6) a court's dissolution of the LLC.

Variable interest entities ("VIEs") are entities that have either a total equity investment that is insufficient to permit the entity to finance its activities without additional subordinated financial support, or whose equity investors lack the characteristics of a controlling financial interest (i.e., the ability to make significant decisions through voting rights and the right to receive the expected residual returns of the entity or the obligation to absorb the expected losses of the entity). A variable interest holder that has both (a) the power to direct the activities of the VIE that most significantly impact its economic performance and (b) either an obligation to absorb losses or a right to receive benefits that could potentially be significant to the VIE is referred to as the primary beneficiary and must consolidate the VIE.

The Company has determined that the LLC is a VIE and the Company is its primary beneficiary. The Company consolidates the LLC because it has the power to direct the activities of the LLC that most significantly impact the LLC's economic performance. In particular, the Company identifies and promotes the deal offerings, provides all of the operational and back office support, presents the LLC's deal offerings via the Company's websites and mobile applications and provides the editorial resources that create the verbiage for the related deal offers.

16. FAIR VALUE MEASUREMENTS

Fair value is defined under U.S. GAAP as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is a market-based measurement that is determined based on assumptions that market participants would use in pricing an asset or a liability.

To increase the comparability of fair value measures, the following hierarchy prioritizes the inputs in valuation methodologies used to measure fair value:

Level 1 - Measurements that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 - Measurements that include other inputs that are directly or indirectly observable in the marketplace.

Level 3 - Measurements derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable. These fair value measurements require significant judgment.

In determining fair value, the Company uses various valuation approaches within the fair value measurement framework. The valuation methodologies used for the Company's assets and liabilities measured at fair value and their classification in the valuation hierarchy are summarized below:

Cash equivalents - Cash equivalents primarily consist of AAA-rated money market funds. The Company classified cash equivalents as Level 1 due to the short-term nature of these instruments and measured the fair value based on quoted prices in active markets for identical assets.

Fair value option and available-for-sale securities investments - See Note 7, *Investments*, for discussion of the valuation methodologies used to measure the fair value of the Company's investments in Monster LP and GroupMax. The Company measures the fair value of those investments using the discounted cash flow method, which is an income approach, and the market approach. The Company also has investments in redeemable preferred shares and convertible debt securities issued by nonpublic entities. The Company measures the fair value of those available-for-sale securities using the discounted cash flow method.

The Company has classified its fair value option investments and its investments in available-for-sale securities as Level 3 due to the lack of observable market data over fair value inputs such as cash flow projections and discount rates. Increases in projected cash flows and decreases in discount rates contribute to increases in the estimated fair values of the fair value

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option investments and available-for-sale securities, whereas decreases in projected cash flows and increases in discount rates contribute to decreases in their fair values.

Contingent consideration - The Company has contingent obligations to transfer cash to the former owners of acquired businesses if specified financial results are met over future reporting periods (i.e., earn-outs). Liabilities for contingent consideration are measured at fair value each reporting period, with the acquisition-date fair value included as part of the consideration transferred and subsequent changes in fair value are recorded in earnings within "Acquisition-related expense (benefit), net" on the consolidated statements of operations.

The Company uses an income approach to value contingent consideration obligations based on future financial performance, which is determined based on the present value of probability-weighted future cash flows. The Company has classified the contingent consideration liabilities as Level 3 due to the lack of relevant observable market data over fair value inputs such as probability-weighting of payment outcomes. Increases in the assessed likelihood of a higher payout under a contingent consideration arrangement contribute to increases in the fair value of the related liability. Conversely, decreases in the assessed likelihood of a higher payout under a contingent consideration arrangement contribute to decreases in the fair value of the related liability. Changes in assumptions could have an impact on the payout of contingent consideration arrangements with a maximum payout of \$15.4 million.

The following tables summarize the Company's assets and liabilities that are measured at fair value on a recurring basis (in thousands):

Description	December 31, 2016	Fair Value Measurement at Reporting Date Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents	\$ 202,241	\$ 202,241	\$ —	\$ —
Fair value option investments	82,584	—	—	82,584
Available-for-sale securities:				
Convertible debt securities	10,038	—	—	10,038
Redeemable preferred shares	17,444	—	—	17,444
Liabilities:				
Contingent consideration	14,588	—	—	14,588

Description	December 31, 2015	Fair Value Measurement at Reporting Date Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents	\$ 305,179	\$ 305,179	\$ —	\$ —
Fair value option investments	130,725	—	—	130,725
Available-for-sale securities:				
Convertible debt securities	10,116	—	—	10,116
Redeemable preferred shares	22,834	—	—	22,834
Liabilities:				
Contingent consideration	10,781	—	—	10,781

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The following table provides a roll-forward of the fair value of recurring Level 3 fair value measurements for the years ended December 31, 2016, 2015 and 2014 (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Assets			
Fair value option investments:			
Beginning Balance	\$ 130,725	\$ —	\$ —
Acquisitions of investments	—	138,475	—
Sale of investments carried at fair value	—	(4,807)	—
Total gains (losses) included in earnings	(48,141)	(2,943)	—
Ending Balance	\$ 82,584	\$ 130,725	\$ —
Unrealized (losses) gains still held ⁽¹⁾	\$ (48,141)	\$ (3,023)	\$ —
Available-for-sale securities			
Convertible debt securities:			
Beginning Balance	\$ 10,116	\$ 2,527	\$ 3,174
Purchases of convertible debt securities	—	6,635	—
Maturity of convertible debt security	(1,685)	—	—
Total gains (losses) included in other comprehensive income (loss)	703	385	693
Total gains (losses) included in other income (expense), net ⁽²⁾	904	569	(1,340)
Ending Balance	\$ 10,038	\$ 10,116	\$ 2,527
Unrealized gains (losses) still held ⁽¹⁾	\$ 1,607	\$ 954	\$ (647)
Redeemable preferred shares:			
Beginning Balance	\$ 22,834	\$ 4,910	\$ —
Purchase of redeemable preferred shares	—	18,375	4,599
Total gains (losses) included in other comprehensive income (loss)	(816)	(451)	311
Transfer to cost method investment classification upon elimination of redemption feature	(4,574)	—	—
Ending Balance	\$ 17,444	\$ 22,834	\$ 4,910
Unrealized gains (losses) still held ⁽¹⁾	\$ (816)	\$ (451)	\$ 311
Liabilities			
Contingent Consideration:			
Beginning Balance	\$ 10,781	\$ 1,983	\$ 606
Issuance of contingent consideration in connection with acquisitions	—	9,605	4,388
Settlements of contingent consideration liabilities	—	(716)	(424)
Reclass to non-fair value liabilities when no longer contingent	(285)	(331)	(143)
Total losses (gains) included in earnings ⁽³⁾	4,092	240	(2,444)
Ending Balance	\$ 14,588	\$ 10,781	\$ 1,983
Unrealized losses (gains) still held ⁽¹⁾	\$ 3,966	\$ (148)	\$ (2,405)

(1) Represents the unrealized losses or gains recorded in earnings and/or other comprehensive income (loss) during the period for assets and liabilities classified as Level 3 that are still held (or outstanding) at the end of the period.

(2) Represents accretion of interest income and changes in the fair value of an embedded derivative.

(3) Changes in the fair value of contingent consideration liabilities are classified within "Acquisition-related expense (benefit), net" on the consolidated statements of operations.

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

Certain assets and liabilities are measured at fair value on a nonrecurring basis, including assets that are written down to

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fair value as a result of an impairment. For the years ended December 31, 2016 and 2015, the Company recorded \$0.4 million and \$7.3 million of impairment charges related to property, equipment and software as a result of the Company's restructuring activities (refer to Note 13, *Restructuring*). Those long-lived assets were written down to their estimated fair values of zero as of December 31, 2016 and 2015. The Company did not record any significant nonrecurring fair value measurements after initial recognition for the year ended December 31, 2014.

Estimated Fair Value of Financial Assets and Liabilities Not Measured at Fair Value

The following table presents the carrying amounts and fair values of financial instruments that are not carried at fair value in the consolidated financial statements (in thousands):

	December 31, 2016		December 31, 2015	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Cost method investments	\$ 31,816	\$ 35,369	\$ 14,561	\$ 15,922

The fair values of the Company's cost method investments were determined using the market approach or the income approach, depending on the availability of fair value inputs such as financial projections for the investees and market multiples for comparable companies. The Company has classified the fair value measurements of its cost method investments as Level 3 measurements within the fair value hierarchy because they involve significant unobservable inputs such as cash flow projections and discount rates.

The Company's other financial instruments not carried at fair value consist primarily of accounts receivable, restricted cash, accounts payable, accrued merchant and supplier payables and accrued expenses. The carrying values of these assets and liabilities approximate their respective fair values as of December 31, 2016 and 2015 due to their short-term nature.

17. INCOME (LOSS) PER SHARE

Basic net income (loss) per share is computed using the weighted-average number of common shares outstanding during the period. Diluted net income (loss) per share is computed using the weighted-average number of common shares and the effect of potentially dilutive securities outstanding during the period. Potentially dilutive securities include stock options, restricted stock units, performance share units, unvested restricted stock awards, ESPP shares, warrants and convertible senior notes. If dilutive, those potentially dilutive securities are reflected in diluted net income (loss) per share by application of the treasury stock method, except for the convertible senior notes, which are subject to the if-converted method.

Each share of the Company's Class A and Class B common stock automatically converted into a single class of common stock on October 31, 2016. Refer to Note 11, *Stockholders' Equity*, for additional information. Prior to the conversion, the Company computed net income (loss) per share of Class A and Class B common stock using the two-class method. Under the two-class method, the undistributed earnings for each period were allocated based on the contractual participation rights of the Class A and Class B common shares as if the earnings for the period had been distributed. As the liquidation and dividend rights were identical for Class A and Class B common shares, the undistributed earnings were allocated on a proportionate basis. Under the two-class method, the computation of diluted net income (loss) per share of Class A common stock would reflect the conversion of Class B common stock, if dilutive, while the computation of diluted net income (loss) per share of Class B common stock did not reflect the conversion of those shares.

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The following table sets forth the computation of basic and diluted loss per share of the common stock and the Class A and Class B common stock for the year ended December 31, 2016 (in thousands, except share amounts and per share amounts):

	Period from January 1, 2016 through October 31, 2016 (pre-conversion)		Period from November 1, 2016 through December 31, 2016 (post-conversion)	Year Ended December 31, 2016 (2)
	Class A	Class B	Common	Total
Basic and diluted net income (loss) per share:				
<i>Numerator</i>				
Allocation of net income (loss)	\$ (158,436)	\$ (662)	\$ (24,225)	\$ (183,323)
Less: Allocation of net income (loss) attributable to noncontrolling interests	9,559	40	1,665	11,264
Allocation of net income (loss) attributable to common stockholders	\$ (167,995)	\$ (702)	\$ (25,890)	\$ (194,587)
<i>Denominator</i>				
Weighted-average common shares outstanding	574,755,214	2,399,976	574,884,987	576,354,258
Basic and diluted net income (loss) per share ⁽¹⁾	\$ (0.29)	\$ (0.29)	\$ (0.05)	\$ (0.34)

- (1) The potentially dilutive impacts of a conversion of Class B to Class A shares, outstanding equity awards, warrants and convertible senior notes have been excluded from the calculation of dilutive net income (loss) per share for the year ended December 31, 2016 as their effect on net income (loss) per share from continuing operations was antidilutive.
- (2) The shares of Class A and Class B common stock had equal dividend rights and converted into shares of common stock on a one-for-one basis on October 31, 2016. This full year column reflects the weighted-average Class A and Class B common shares outstanding for the period from January 1, 2016 through the October 31, 2016 conversion date and the weighted average common shares outstanding for the period from November 1, 2016 through December 31, 2016 in the denominator of the basic and diluted loss per share calculations for the year ended December 31, 2016.

The following table sets forth the computation of basic and diluted loss per share of Class A and Class B common stock for the years ended December 31, 2015 and 2014 (in thousands, except share amounts and per share amounts):

	Year Ended December 31,			
	2015		2014	
	Class A	Class B	Class A	Class B
Basic and diluted net income (loss) per share:				
<i>Numerator</i>				
Allocation of net income (loss) - continuing operations	\$ (88,842)	\$ (329)	\$ (18,407)	\$ (66)
Less: Allocation of net income (loss) attributable to noncontrolling interests	12,963	48	9,138	33
Allocation of net income (loss) attributable to common stockholders - continuing operations	\$ (101,805)	\$ (377)	\$ (27,545)	\$ (99)
Allocation of net income (loss) attributable to common stockholders - discontinued operations	122,396	454	(45,284)	(162)
Allocation of net income (loss) attributable to common stockholders	\$ 20,591	\$ 77	\$ (72,829)	\$ (261)
<i>Denominator</i>				
Weighted-average common shares outstanding	647,706,249	2,399,976	672,432,417	2,399,976
Basic and diluted net income (loss) per share ⁽¹⁾:				
Continuing operations	\$ (0.16)	\$ (0.16)	\$ (0.04)	\$ (0.04)
Discontinued operations	0.19	0.19	(0.07)	(0.07)
Basic and diluted net income (loss) per share	\$ 0.03	\$ 0.03	\$ (0.11)	\$ (0.11)

- (1) The potentially dilutive impacts of a conversion of Class B to Class A shares and outstanding equity awards have been excluded from the calculation of dilutive net income (loss) per share for the years ended December 31, 2015 and 2014 as their effect on net income (loss) per share from continuing operations was antidilutive.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following weighted-average outstanding equity awards are not included in the diluted net income (loss) per share calculations above because they would have had an antidilutive effect on the net income (loss) per share from continuing operations:

	Year Ended December 31,		
	2016	2015	2014
Stock options	1,204,512	1,884,958	2,775,771
Restricted stock units	33,480,458	41,079,648	42,341,320
Performance share units	125,934	—	—
Restricted stock	1,335,613	1,346,447	52,854
ESPP shares	1,184,330	916,837	507,916
Convertible senior notes	34,213,474	—	—
Warrants	29,761,907	—	—
Total	101,306,228	45,227,890	45,677,861

18. SEGMENT INFORMATION

The company organizes its operations into three segments: North America, EMEA, which is comprised of Europe, Middle East and Africa, and the remainder of the Company's international operations ("Rest of World"). Segment operating results reflect earnings before stock-based compensation, acquisition-related expense (benefit), net, other income (expense), net and provision (benefit) for income taxes. Segment information reported in the tables below represents the operating segments of the Company organized in a manner consistent with which separate information is available and for which segment results are evaluated regularly by the Company's chief operating decision-maker in assessing performance and allocating resources.

Revenue and profit or loss information by reportable segment reconciled to consolidated net income (loss) for the years ended December 31, 2016, 2015 and 2014 were as follows (in thousands):

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	Year Ended December 31,		
	2016	2015	2014
North America			
Revenue ⁽¹⁾	\$ 2,151,769	\$ 2,047,742	\$ 1,824,461
Segment cost of revenue and operating expenses ^{(2) (3) (4)}	2,126,834	2,029,643	1,755,113
Segment operating income (loss) ^{(2) (3) (4)}	24,935	18,099	69,348
EMEA			
Revenue ⁽¹⁾	827,196	867,880	961,130
Segment cost of revenue and operating expenses ^{(2) (3) (5)}	813,177	797,786	857,062
Segment operating income (loss) ^{(2) (3) (5)}	14,019	70,094	104,068
Rest of World			
Revenue	164,389	203,894	256,532
Segment cost of revenue and operating expenses ^{(2) (3)}	190,135	228,273	282,688
Segment operating income (loss) ^{(2) (3)}	(25,746)	(24,379)	(26,156)
Consolidated			
Revenue	3,143,354	3,119,516	3,042,123
Segment cost of revenue and operating expenses ^{(2) (3)}	3,130,146	3,055,702	2,894,863
Segment operating income (loss) ^{(2) (3)}	13,208	63,814	147,260
Stock-based compensation ⁽⁶⁾	117,321	141,734	115,290
Acquisition-related expense (benefit), net	5,650	1,857	1,269
Income (loss) from operations	(109,763)	(79,777)	30,701
Other income (expense), net	(76,107)	(28,539)	(33,450)
Income (loss) from continuing operations before provision (benefit) for income taxes	(185,870)	(108,316)	(2,749)
Provision (benefit) for income taxes	(2,547)	(19,145)	15,724
Income (loss) from continuing operations	(183,323)	(89,171)	(18,473)
Income (loss) from discontinued operations, net of tax	—	122,850	(45,446)
Net income (loss)	\$ (183,323)	\$ 33,679	\$ (63,919)

- (1) North America includes revenue from the United States of \$2,120.3 million, \$2,022.5 million and \$1,784.6 million for the years ended December 31, 2016, 2015 and 2014, respectively. Direct revenue transactions in the EMEA Goods category have been transacted through a Switzerland-based subsidiary. As a result, EMEA includes revenue from Switzerland of \$551.7 million, \$496.2 million and \$468.7 million for the years ended December 31, 2016, 2015 and 2014, respectively. There were no other individual countries that represented more than 10% of consolidated total revenue for the years ended December 31, 2016, 2015 and 2014. Revenue is attributed to individual countries based on the domicile of the legal entities within the Company's consolidated group that undertook those transactions.
- (2) Segment cost of revenue and operating expenses and segment operating income (loss) exclude stock-based compensation and acquisition-related (benefit) expense, net. This presentation corresponds to the measure of segment profit or loss that the Company's chief operating decision-maker uses in assessing segment performance and making resource allocation decisions. The following table summarizes the Company's stock-based compensation expense and acquisition-related expense (benefit), net by reportable segment for the years ended December 31, 2016, 2015 and 2014 (in thousands):

	Year Ended December 31,					
	2016		2015		2014	
	Stock-based compensation	Acquisition-related	Stock-based compensation	Acquisition-related	Stock-based compensation	Acquisition-related
North America	\$ 104,708	\$ 5,650	\$ 124,078	\$ 1,857	\$ 99,939	\$ 1,125
EMEA	7,220	—	11,445	—	9,927	144
Rest of World	6,224	—	6,546	—	5,424	—
Consolidated	\$ 118,152	\$ 5,650	\$ 142,069	\$ 1,857	\$ 115,290	\$ 1,269

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Acquisition-related expense (benefit), net for the North America segment includes external transaction costs and gains and losses relating to contingent consideration obligations incurred by U.S. legal entities relating to purchases of businesses that became part of the EMEA and Rest of World segments, which is consistent with the attribution used for internal reporting purposes.

- (3) Segment cost of revenue and operating expenses for the year ended December 31, 2016 includes restructuring charges of \$9.5 million in North America (which excludes \$2.6 million of stock-based compensation), \$23.1 million in EMEA (which excludes \$2.0 million of stock-based compensation) and \$6.3 million in Rest of World (which excludes \$0.1 million of stock-based compensation). Segment cost of revenue and operating expenses for the year ended December 31, 2015 includes restructuring charges of \$10.5 million in North America, \$16.1 million in EMEA and \$3.0 million in Rest of World. See Note 13, *Restructuring*, for additional information.
- (4) Segment cost of revenue and operating expenses for North America for the year ended December 31, 2015 includes a \$37.5 million expense related to an increase in the Company's contingent liability for its securities litigation matter. See Note 10, *Commitments and Contingencies*, for additional information.
- (5) Segment cost of revenue and operating expenses for EMEA for the year ended December 31, 2015 includes a \$6.7 million expense for the write-off of a prepaid asset related to a marketing program that was discontinued because the counterparty ceased operations.
- (6) Includes stock-based compensation classified within cost of revenue, marketing expense, selling, general and administrative expense and restructuring charges. Other income (expense), net, includes \$0.8 million and \$0.3 million of additional stock-based compensation for the years ended December 31, 2016 and 2015, respectively.

The following table summarizes the Company's total assets by reportable segment as of December 31, 2016 and 2015 (in thousands):

	December 31,	
	2016	2015
North America ⁽¹⁾	\$ 1,122,261	\$ 1,063,595
EMEA	466,946	508,353
Rest of World	172,170	224,316
Consolidated total assets	\$ 1,761,377	\$ 1,796,264

- (1) North America contains assets from the United States of \$1,057.6 million and \$1,018.2 million as of December 31, 2016 and 2015, respectively. EMEA contains assets from Ireland of \$203.2 million as of December 31, 2016. There were no other individual countries that represented more than 10% of consolidated total assets as of December 31, 2016 and 2015, respectively.

The following table summarizes the Company's tangible property and equipment, net of accumulated depreciation and amortization, by reportable segment as of December 31, 2016 and 2015 (in thousands):

	December 31,	
	2016	2015
North America ⁽¹⁾	\$ 69,577	\$ 87,050
EMEA ⁽²⁾	21,833	26,264
Rest of World	3,757	4,876
Consolidated total	\$ 95,167	\$ 118,190

- (1) Substantially all tangible property and equipment within North America is located in the United States.
- (2) Tangible property and equipment, net located within Ireland represented approximately 17% and 11% of the Company's consolidated tangible property and equipment, net as of December 31, 2016 and 2015, respectively. There were no other individual countries located outside of the United States that represented more than 10% of consolidated tangible property and equipment, net as of December 31, 2016 and 2015.

The following table summarizes depreciation and amortization of property, equipment and software and intangible assets by reportable segment for the years ended December 31, 2016, 2015 and 2014 (in thousands):

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	Year Ended December 31,		
	2016	2015	2014
North America	\$ 116,865	\$ 108,973	\$ 83,106
EMEA	16,822	18,834	24,849
Rest of World	3,981	5,163	7,086
Consolidated total	<u>\$ 137,668</u>	<u>\$ 132,970</u>	<u>\$ 115,041</u>

The following table summarizes the Company's expenditures for additions to tangible long-lived assets by reportable segment for the years ended December 31, 2016, 2015 and 2014 (in thousands):

	Year Ended December 31,		
	2016	2015	2014
North America	\$ 9,770	\$ 10,207	\$ 6,775
EMEA	3,562	14,251	12,945
Rest of World	2,229	4,380	10,092
Consolidated total	<u>\$ 15,561</u>	<u>\$ 28,838</u>	<u>\$ 29,812</u>

Category Information

The Company offers goods and services through its online local commerce marketplaces in three primary categories: Local, Goods and Travel. Collectively, Local and Travel comprise the Company's "Services" offerings and Goods reflects its product offerings. The Company also earns advertising revenue and commission revenue generated when customers make purchases with retailers using digital coupons accessed through the Company's websites and mobile applications. Revenue and gross profit from those other sources, which are primarily generated through the Company's relationships with local and national merchants, are included within the Local category in the tables below.

The following table summarizes the Company's third-party and other and direct revenue by category for its three reportable segments for the years ended December 31, 2016, 2015 and 2014 (in thousands):

	North America			EMEA			Rest of World			Consolidated		
	Year Ended December 31,			Year Ended December 31,			Year Ended December 31,			Year Ended December 31,		
	2016	2015	2014	2016	2015	2014	2016	2015	2014	2016	2015	2014
Local ⁽¹⁾ :												
Third-party and other	\$ 762,314	\$ 701,312	\$ 674,605	\$ 241,683	\$ 302,085	\$ 391,179	\$ 88,488	\$ 107,381	\$ 147,248	\$ 1,092,485	\$ 1,110,778	\$ 1,213,032
Travel:												
Third-party	82,577	81,731	68,977	45,909	53,059	63,957	18,869	24,091	26,407	147,355	158,881	159,341
Total services	844,891	783,043	743,582	287,592	355,144	455,136	107,357	131,472	173,655	1,239,840	1,269,659	1,372,373
Goods:												
Third-party	9,068	7,151	5,966	25,077	50,366	63,650	29,561	45,357	59,022	63,706	102,874	128,638
Direct	1,297,810	1,257,548	1,074,913	514,527	462,370	442,344	27,471	27,065	23,855	1,839,808	1,746,983	1,541,112
Total	1,306,878	1,264,699	1,080,879	539,604	512,736	505,994	57,032	72,422	82,877	1,903,514	1,849,857	1,669,750
Total revenue	<u>\$ 2,151,769</u>	<u>\$ 2,047,742</u>	<u>\$ 1,824,461</u>	<u>\$ 827,196</u>	<u>\$ 867,880</u>	<u>\$ 961,130</u>	<u>\$ 164,389</u>	<u>\$ 203,894</u>	<u>\$ 256,532</u>	<u>\$ 3,143,354</u>	<u>\$ 3,119,516</u>	<u>\$ 3,042,123</u>

(1) Includes revenue from deals with local and national merchants and through local events.

The following table summarizes the Company's gross profit by category for its three reportable segments for the years ended December 31, 2016, 2015 and 2014 (in thousands):

	North America			EMEA			Rest of World			Consolidated		
	Year Ended December 31,			Year Ended December 31,			Year Ended December 31,			Year Ended December 31,		
	2016	2015	2014	2016	2015	2014	2016	2015	2014	2016	2015	2014
Local ⁽¹⁾ :												
Third-party and other	\$ 660,983	\$ 600,893	\$ 581,067	\$ 226,182	\$282,880	\$ 364,545	\$ 75,400	\$ 92,185	\$ 125,343	\$ 962,565	\$ 975,958	\$1,070,955
Travel:												
Third-party	64,355	67,027	56,994	42,128	47,394	59,229	14,701	18,817	19,932	121,184	133,238	136,155
Total services	725,338	667,920	638,061	268,310	330,274	423,774	90,101	111,002	145,275	1,083,749	1,109,196	1,207,110
Goods:												
Third-party	7,470	5,931	5,112	21,519	42,782	55,434	19,080	25,692	30,297	48,069	74,405	90,843
Direct	152,739	127,720	88,810	72,577	72,508	77,706	(231)	1,236	840	225,085	201,464	167,356
Total	160,209	133,651	93,922	94,096	115,290	133,140	18,849	26,928	31,137	273,154	275,869	258,199
Total gross profit	<u>\$ 885,547</u>	<u>\$ 801,571</u>	<u>\$ 731,983</u>	<u>\$ 362,406</u>	<u>\$445,564</u>	<u>\$ 556,914</u>	<u>\$ 108,950</u>	<u>\$ 137,930</u>	<u>\$ 176,412</u>	<u>\$1,356,903</u>	<u>\$1,385,065</u>	<u>\$1,465,309</u>

(1) Includes gross profit from deals with local and national merchants and through local events.

GROUPON, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

19. RELATED PARTY TRANSACTION

On December 28, 2016, the Company entered into a sublease, subject to landlord consents, for portions of its office space in Chicago, Illinois to Uptake, Inc. ("Uptake"), a Lightbank LLC ("Lightbank") portfolio company. Brad Keywell, one of the Company's directors, is the chief executive officer of Uptake. Eric Lefkowsky, the Company's Chairman of the Board, and Mr. Keywell co-founded Lightbank, a private investment firm specializing in information technology companies. They are the majority shareholders of Lightbank, and Mr. Keywell is managing director of Lightbank. The sublease was negotiated on an arm's-length basis and is a market rate transaction on terms that the Company believes are no less favorable than would have been reached with an unrelated third party. The sublease extends through January 31, 2026 and the sublease rentals over that term total approximately \$17.9 million. Pursuant to the Company's related party transaction policy, the Company's Audit Committee approved the Company entering into the sublease.

20. QUARTERLY RESULTS (UNAUDITED)

The following table represents data from the Company's unaudited consolidated statements of operations for the most recent eight quarters. This quarterly information has been prepared on the same basis as the consolidated financial statements and includes all normal recurring adjustments necessary to fairly state the information for the periods presented. The results of operations of any quarter are not necessarily indicative of the results that may be expected for any future period (in thousands, except share and per share amounts).

	Quarter Ended							
	Dec. 31,	Sept. 30,	June 30,	Mar. 31,	Dec. 31,	Sept. 30,	June 30,	Mar. 31,
	2016 ⁽¹⁾ ⁽⁵⁾	2016 ⁽¹⁾	2016 ⁽¹⁾	2016 ⁽¹⁾	2015 ⁽¹⁾ ⁽²⁾	2015 ⁽¹⁾ ⁽³⁾	2015 ⁽⁴⁾	2015
Consolidated Statements of Operations Data:								
Revenue	\$ 934,885	\$ 720,468	\$ 756,030	\$ 731,971	\$ 917,170	\$ 713,595	\$ 738,395	\$ 750,356
Cost of revenue	565,015	406,351	422,442	392,643	545,430	384,683	401,388	402,950
Gross profit	369,870	314,117	333,588	339,328	371,740	328,912	337,007	347,406
Income (loss) from operations	7,424	(26,685)	(43,169)	(47,333)	(5,423)	(70,423)	(9,226)	5,295
Income (loss) from continuing operations	(50,204)	(35,792)	(51,731)	(45,596)	(32,552)	(24,613)	(15,267)	(16,739)
Income (loss) from discontinued operations, net of tax	—	—	—	—	(10,613)	—	127,179	6,284
Net income (loss) attributable to Groupon, Inc.	(52,588)	(37,976)	(54,904)	(49,119)	(46,528)	(27,615)	109,084	(14,273)
Basic net and diluted income (loss) per share ⁽⁶⁾ :								
Continuing operations	\$ (0.09)	\$ (0.07)	\$ (0.10)	\$ (0.08)	\$ (0.06)	\$ (0.04)	\$ (0.03)	\$ (0.03)
Discontinued operations	—	—	—	—	(0.02)	—	0.19	0.01
Basic and diluted net income (loss) per share	\$ (0.09)	\$ (0.07)	\$ (0.10)	\$ (0.08)	\$ (0.08)	\$ (0.04)	\$ 0.16	\$ (0.02)
Weighted average number of shares outstanding								
Basic	570,546,159	575,216,191	576,903,004	582,751,678	607,517,010	644,894,785	671,630,169	676,382,937
Diluted	570,546,159	575,216,191	576,903,004	582,751,678	607,517,010	644,894,785	671,630,169	676,382,937

- (1) Income (loss) from continuing operations for the three months ended December 31, 2016, September 30, 2016, June 30, 2016, March 31, 2016, December 31, 2015 and September 30, 2015 includes restructuring charges of \$ 13.6 million, \$ 1.5 million, \$ 16.1 million, \$ 12.4 million, \$ 5.4 million and \$ 24.1 million, respectively.
- (2) The \$10.6 million loss presented within income (loss) from discontinued operations, net of tax, for the three months ended December 31, 2015 represents additional income tax expense attributed to discontinued operations, which resulted from the valuation allowance that was recognized during the period against the Company's net deferred tax assets in the United States.
- (3) Income (loss) from continuing operations for the three months ended September 30, 2015 includes a \$37.5 million expense related to an increase in the Company's contingent liability in its securities litigation matter and a \$6.7 million expense for the write-off of a prepaid asset related to a marketing program that was discontinued because the counterparty ceased operations.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

- (4) Income (loss) from discontinued operations, net of tax, for the three months ended June 30, 2015 includes a \$154.1 million gain, net of tax, from the sale of a controlling stake in Ticket Monster.
- (5) The shares of Class A and Class B common stock had equal dividend rights and converted into shares of common stock on a one-for-one basis on October 31, 2016. This column reflects the weighted-average Class A and Class B common shares outstanding for the period from October 1, 2016 through the October 31, 2016 conversion date and the weighted average common shares outstanding for the period from November 1, 2016 through December 31, 2016 in the denominator of the basic and diluted loss per share calculations for the three months ended December 31, 2016.
- (6) The sum of per share amounts for quarterly periods may not equal year-to-date amounts due to rounding.

Monster Holdings LP
Consolidated Financial Statements
For the Period from May 27, 2015 through December 31, 2015

Report of Independent Auditors

The Board of Directors and Partners of Monster Holdings LP

We have audited the accompanying consolidated financial statements of Monster Holdings LP, which comprise the consolidated balance sheet as of December 31, 2015, and the related consolidated statement of operations, comprehensive loss, changes in partners' capital and cash flows for the period from May 27, 2015 through December 31, 2015, and the related notes to the consolidated financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in conformity with U.S. generally accepted accounting principles; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free of material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Monster Holdings LP at December 31, 2015, and the consolidated results of its operations and its cash flows for the period from May 27, 2015 through December 31, 2015 in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young Han Young
Seoul, Republic of Korea
March 30, 2016

Monster Holdings LP
Consolidated Balance Sheet
As of December 31, 2015
(USD in thousands, except unit amounts)

	December 31, 2015
Assets	
Current assets:	
Cash and cash equivalents	\$ 81,763
Accounts receivable, net	21,821
Prepaid expenses and other current assets	48,768
Total current assets	152,352
Property, equipment and software, net	11,453
Goodwill	355,101
Intangible assets, net	111,399
Other non-current assets	5,943
Total Assets	\$ 636,248
Liabilities and Partners' Capital	
Current liabilities:	
Accounts payable	\$ 37,089
Accrued merchant and supplier payables	218,947
Accrued expenses and other current liabilities	21,454
Total current liabilities	277,490
Other non-current liabilities	5,125
Total Liabilities	282,615
Commitments and contingencies (see Note 8)	
Partners' Capital	
Class A units (72,000,000 units authorized and 72,000,000 units issued and outstanding at December 31, 2015)	360,000
Class B units (64,000,000 units authorized and 64,000,000 units issued and outstanding at December 31, 2015)	21,024
Class C units (20,321,839 units authorized and no units issued and outstanding at December 31, 2015)	—
Accumulated other comprehensive loss	(27,391)
Total Partners' Capital	353,633
Total Liabilities and Partners' Capital	\$ 636,248

The accompanying notes are an integral part of these consolidated financial statements.

Monster Holdings LP**Consolidated Statement of Operations****For the Period from May 27, 2015 through December 31, 2015****(USD in thousands)**

	Period from May 27, 2015 through December 31, 2015	
Revenue:		
Third party and other	\$	20,810
Direct		63,087
Total revenue		83,897
Cost of revenue:		
Third party and other		21,357
Direct		81,526
Total cost of revenue		102,883
Gross profit (loss)		(18,986)
Operating expenses:		
Marketing		32,537
Selling, general and administrative		59,855
Total operating expenses		92,392
Loss from operations		(111,378)
Other income, net		3,459
Net loss before provision (benefit) for income taxes		(107,919)
Provision (benefit) for income taxes		—
Net loss	\$	(107,919)

The accompanying notes are an integral part of these consolidated financial statements.

Monster Holdings LP**Consolidated Statement of Comprehensive Loss****For the Period from May 27, 2015 through December 31, 2015****(USD in thousands)**

	Period from May 27, 2015 through	
	December 31, 2015	
Net loss	\$	(107,919)
Other comprehensive loss:		
Foreign currency translation adjustments		(27,391)
Comprehensive loss	\$	<u>(135,310)</u>

The accompanying notes are an integral part of these consolidated financial statements.

Monster Holdings LP**Consolidated Statement of Changes in Partners' Capital****For the Period from May 27, 2015 through December 31, 2015****(USD in thousands, except unit amounts)**

	Partners' capital						Accumulated other comprehensive loss	Total
	Class A		Class B		Class C			
	Units	Amount	Units	Amount	Units	Amount		
Balance at May 27, 2015	70,000,000	\$ 350,000	—	\$ —	—	\$ —	\$ —	\$ 350,000
Cash contributions for Class A units	2,000,000	10,000	—	—	—	—	—	10,000
Class B units issued in connection with acquisition	—	—	64,000,000	128,607	—	—	—	128,607
Net loss	—	—	—	(107,919)	—	—	—	(107,919)
Expenses funded by Class B unit holder	—	—	—	336	—	—	—	336
Foreign currency translation	—	—	—	—	—	—	(27,391)	(27,391)
Balance at December 31, 2015	72,000,000	\$ 360,000	64,000,000	\$ 21,024	—	\$ —	\$ (27,391)	\$ 353,633

The accompanying notes are an integral part of these consolidated financial statements.

Monster Holdings LP**Consolidated Statement of Cash Flows****For the Period from May 27, 2015 through December 31, 2015****(USD in thousands)**

	Period from May 27, 2015 through	
	December 31, 2015	
Operating activities		
Net loss	\$	(107,919)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization		14,378
Expenses funded by Class B unit holder		336
Change in assets and liabilities, net of acquisitions:		
Restricted cash		(15,495)
Accounts receivable		(5,504)
Prepaid expenses and other current assets		(16,920)
Other non-current assets		(2,513)
Accounts payable		27,022
Accrued merchant and supplier payables		80,488
Accrued expenses and other current liabilities		4,296
Other, net		(106)
Net cash used in operating activities		(21,937)
Investing activities		
Purchases of property and equipment and capitalized software		(6,796)
Acquisition of business, net of acquired cash		(247,484)
Net cash used in investing activities		(254,280)
Financing activities		
Contributions from Class A limited partners		10,000
Net cash provided by financing activities		10,000
Effect of exchange rate changes on cash and cash equivalents		(2,020)
Net decrease in cash and cash equivalents		(268,237)
Cash and cash equivalents, beginning of period		350,000
Cash and cash equivalents, end of period	\$	81,763
Non-cash financing activities		
Issuance of Class B units in connection with acquisition of business	\$	128,607

The accompanying notes are an integral part of these consolidated financial statements.

Monster Holdings LP**Notes to Consolidated Financial Statements****For the Period from May 27, 2015 through December 31, 2015****1. DESCRIPTION OF BUSINESS AND BASIS OF PRESENTATION**

Monster Holdings LP (the "Partnership") is a Delaware Limited Partnership that was formed on April 1, 2015 and had no operations until May 27, 2015, when the Partnership acquired from a wholly-owned subsidiary of Groupon Inc. ("Groupon") all of the outstanding equity interests of LivingSocial Korea, Inc. ("LSK"), a Korean corporation and holding company of Ticket Monster Inc. ("Ticket Monster"). The accompanying consolidated financial statements are presented from May 27, 2015, the date on which Groupon sold LSK to the Partnership and recognized its minority interest in that entity.

Ticket Monster is an e-commerce company based in the Republic of Korea that connects merchants to consumers by offering goods and services at a discount. Ticket Monster acts as a marketing agent by selling vouchers that can be redeemed for products or services with third party merchants. Ticket Monster also sells merchandise inventory directly to customers. Customers can access Ticket Monster's deal offerings directly through its website and mobile application and indirectly using search engines. Ticket Monster also sends emails to its subscribers with deal offerings that are targeted by location and personal preferences.

Liquidity Risks

As of December 31, 2015, the Partnership had \$81.8 million of cash and cash equivalents and a working capital deficit of \$125.1 million. In the normal course of business, the Partnership collects cash from credit card payment processors shortly after a sale occurs and remits payments to merchants and suppliers at a later date in accordance with the related contractual payment terms. This favorable working capital cycle is expected to continue for the foreseeable future. For the period from May 27, 2015 through December 31, 2015, the Partnership incurred \$21.9 million of negative cash flows from operations and \$6.8 million of capital expenditures. The Partnership believes that its current liquidity resources will be adequate to meet its obligations as they come due for a period of at least one year from March 30, 2016, the date at which the consolidated financial statements were available to be issued. In the event of any unexpected adverse change in its business, the Partnership has the ability and intent to reduce discretionary spending to increase liquidity and also plans to obtain additional equity or debt financing.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES*Principles of Consolidation*

The consolidated financial statements include the accounts of the Partnership and its subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. The Partnership's consolidated financial statements were prepared in accordance with accounting principles generally accepted in the United States ("U.S. GAAP") and include the assets, liabilities, revenue and expenses of all subsidiaries over which the Partnership exercises control.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires estimates and assumptions that affect the reported amounts and classifications of assets and liabilities, revenues and expenses, and the related disclosures of contingent liabilities in the consolidated financial statements and accompanying notes. Estimates are utilized for, but not limited to, income taxes, valuation of acquired goodwill and intangible assets, customer refunds, contingent liabilities and the useful lives of property and equipment and intangible assets. Actual results could differ materially from those estimates.

Cash and Cash Equivalents

The Partnership considers all highly-liquid investments with an original maturity of three months or less from the date of purchase to be cash equivalents.

Accounts Receivable, Net

Accounts receivable primarily represents the net cash due from the Partnership's credit card and other payment processors for cleared transactions. The carrying amount of the Partnership's receivables is reduced by an allowance for doubtful accounts that reflects management's best estimate of amounts that will not be collected. The allowance is based on historical loss experience.

Monster Holdings LP**Notes to Consolidated Financial Statements****For the Period from May 27, 2015 through December 31, 2015**

and any specific risks identified in collection matters. Accounts receivable are charged off against the allowance for doubtful accounts when it is determined that the receivable is uncollectible.

Inventories

Inventories, consisting of merchandise purchased for resale, are accounted for using the weighted average cost method of accounting and are valued at the lower of cost or market value. The Partnership writes down its inventory to the lower of cost or market value based upon assumptions about future demand and market conditions. If actual market conditions are less favorable than those projected by the Partnership, additional inventory write-downs may be required. Once established, the original cost of the inventory less the related inventory write-down represents a new cost basis.

Restricted Cash

Restricted cash primarily represents amounts that the Partnership is unable to access for operational purposes pursuant to contractual arrangements with certain financial institutions. The Partnership had \$16.4 million of restricted cash recorded within "Prepaid expenses and other current assets" as of December 31, 2015.

Property and Equipment

Property and equipment are stated at cost. Depreciation of property and equipment is recorded on a straight-line basis over the estimated useful lives of the assets. Generally, the useful lives are three years for computer equipment, office furniture and equipment, software and the shorter of the term of the lease or the asset's useful life for leasehold improvements.

Internal-Use Software

The Partnership incurs costs related to internal-use software and website development, including purchased software and internally-developed software. Costs incurred in the planning and evaluation stage of internally-developed software and website development are expensed as incurred. Costs incurred and accumulated during the application development stage are capitalized and included within "Property, equipment and software, net" on the consolidated balance sheet. Amortization of internal-use software is recorded on a straight-line basis over the estimated useful lives of three years.

Impairment of Long-lived Assets

Long-lived assets, such as property and equipment and intangible assets, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. If circumstances require that a long-lived asset or asset group be tested for possible impairment, the Partnership first compares the undiscounted cash flows expected to be generated by that long-lived asset or asset group to its carrying amount. If the carrying amount of the long-lived asset or asset group is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying amount exceeds its fair value.

Goodwill

Goodwill is allocated to the Partnership's sole reporting unit at the date the goodwill is initially recorded. Once goodwill has been allocated to the reporting unit, it no longer retains its identification with a particular acquisition and becomes identified with the reporting unit in its entirety. Accordingly, the fair value of the reporting unit as a whole is available to support the recoverability of its goodwill.

The Partnership evaluates goodwill for impairment annually or more frequently when an event occurs or circumstances change that indicates the carrying value may not be recoverable. The Partnership has the option to assess goodwill for impairment by first performing a qualitative assessment to determine whether it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount. If the Partnership determines that it is not more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, then the two-step goodwill impairment test is not required to be performed. If the Partnership determines that it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, or if the Partnership

Monster Holdings LP**Notes to Consolidated Financial Statements****For the Period from May 27, 2015 through December 31, 2015**

does not elect the option to perform an initial qualitative assessment, the Partnership performs the two-step goodwill impairment test. In the first step, the fair value of the reporting unit is compared to its book value including goodwill. If the fair value of the reporting unit is in excess of its book value, the related goodwill is not impaired and no further analysis is necessary. If the fair value of the reporting unit is less than its book value, there is an indication of potential impairment and a second step is performed. When required, the second step of testing involves calculating the implied fair value of goodwill for the reporting unit. The implied fair value of goodwill is determined in the same manner as goodwill recognized in a business combination, which is the excess of the fair value of the reporting unit determined in step one over the fair value of its net assets, including identifiable intangible assets, as if the reporting unit had been acquired. If the carrying value of the reporting unit's goodwill exceeds the implied fair value of that goodwill, an impairment loss is recognized in an amount equal to that excess.

Income Taxes

For U.S. Federal income tax purposes, the Partnership is a pass-through entity and all applicable U.S. income taxes are the responsibility of the partners. However, its subsidiaries are subject to income taxes in the Republic of Korea. The Partnership accounts for income taxes of its Korean subsidiaries using the asset and liability method, under which deferred income tax assets and liabilities are recognized based upon anticipated future tax consequences attributable to differences between the financial statement carrying amounts of assets and liabilities and their respective tax bases. The Partnership regularly reviews deferred tax assets to assess whether it is more-likely-than-not that the deferred tax assets will be realized and, if necessary, establishes a valuation allowance for portions of such assets to reduce the carrying value.

For purposes of assessing whether it is more-likely-than-not that deferred tax assets will be realized, the Partnership considers the following four sources of taxable income for each tax jurisdiction: (a) future reversals of existing taxable temporary differences, (b) projected future earnings, (c) taxable income in carryback years, to the extent that carrybacks are permitted under the tax laws of the applicable jurisdiction, and (d) tax planning strategies, which represent prudent and feasible actions that a company ordinarily might not take, but would take to prevent an operating loss or tax credit carryforward from expiring unused. To the extent that evidence about one or more of these sources of taxable income is sufficient to support a conclusion that a valuation allowance is not necessary, other sources need not be considered. Otherwise, evidence about each of the sources of taxable income is considered in arriving at a conclusion about the need for and amount of a valuation allowance. See Note 10, "*Income Taxes*," for further information about the Partnership's valuation allowance assessments.

The Partnership accounts for uncertainty in income taxes by recognizing the financial statement benefit of a tax position only after determining that the relevant tax authority would more-likely-than-not sustain the position following an audit. For tax positions meeting the more-likely-than-not criteria, the amount recognized in the consolidated financial statements is the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate settlement with the relevant tax authority.

The Partnership adopted the guidance in Accounting Standards Update ("ASU") 2015-17, *Balance Sheet Classification of Deferred Taxes*, for the period ended December 31, 2015. The guidance requires entities to present all deferred income tax assets and liabilities as non-current on the balance sheet.

Leases

The Partnership classifies leases at their inception as either operating or capital leases and may receive renewal or expansion options, rent holidays, and leasehold improvement or other incentives on certain lease agreements. The Partnership recognizes operating lease costs on a straight-line basis, taking into account adjustments for free or escalating rental payments and deferred payment terms. Additionally, lease incentives are accounted for as a reduction of lease costs over the lease term. Rent expense associated with operating lease obligations is primarily classified within "Selling, general and administrative expenses" on the consolidated statement of operations.

Monster Holdings LP**Notes to Consolidated Financial Statements****For the Period from May 27, 2015 through December 31, 2015***Revenue Recognition*

The Partnership recognizes revenue when the following criteria are met: persuasive evidence of an arrangement exists; delivery has occurred; the selling price is fixed or determinable; and collectability is reasonably assured.

Third party revenue recognition

The Partnership generates third party revenue, where it acts as a marketing agent, by selling vouchers through its online local commerce marketplaces that can be redeemed for goods or services with third party merchants.

For transactions involving the sale of vouchers, the revenue recognition criteria are met when the customer purchases the voucher, the voucher has been electronically delivered to the purchaser and a listing of vouchers sold has been made available to the merchant. At that time, the Partnership's obligations to the merchant, for which it is serving as a marketing agent, are substantially complete. The Partnership's remaining obligations, which are limited to remitting payment to the merchant and continuing to make available on its website information about vouchers sold that was previously provided to the merchant, are inconsequential and perfunctory administrative activities.

Third party revenue is reported on a net basis as the purchase price received from the customer for the voucher less the portion of the purchase price that is payable to the featured merchant, excluding applicable taxes and net of estimated refunds for which the merchant's share is recoverable. Revenue is presented on a net basis because the Partnership is acting as a marketing agent of the merchant in the transaction.

For merchant payment arrangements that are structured under a redemption model, merchants are not paid until the customer redeems the voucher that has been purchased. If a customer does not redeem the voucher under this payment model, the Partnership retains the entire voucher purchase price. The Partnership recognizes incremental revenue and derecognizes the related accrued merchant payable when its legal obligation to the merchant expires, which the Partnership believes is shortly after deal expiration.

Direct revenue recognition

The Partnership evaluates whether it is appropriate to record the gross amount of sales and related costs by considering a number of factors, including, among other things, whether the Partnership is the primary obligor under the arrangement, has inventory risk and has latitude in establishing prices.

Direct revenue of the Partnership is derived primarily from selling merchandise inventory in transactions for which it is the merchant of record. The Partnership is the primary obligor in these transactions, is subject to general inventory risk and has latitude in establishing prices. Accordingly, direct revenue is presented on a gross basis, excluding applicable taxes and net of estimated refunds. Direct revenue, including associated shipping revenue, is recognized when title passes to the customer upon delivery of the product.

For merchandise inventory transactions in which the Partnership acts as a marketing agent of a third party merchant, revenue is recorded on a net basis and is presented within third party revenue. The Partnership is generally not responsible for fulfillment on third party revenue transactions involving merchandise inventory and revenue is recognized when the Partnership's obligations to the merchant, for which it is serving as a marketing agent, are substantially complete.

Other revenue recognition

The Partnership's other revenues are derived primarily from advertising arrangements with third parties. Revenue from advertising sales is recognized as advertising services are provided to the Partnership's customers.

Discounts

The Partnership provides discount offers to encourage purchases of goods and services through its marketplaces. The

Monster Holdings LP**Notes to Consolidated Financial Statements****For the Period from May 27, 2015 through December 31, 2015**

Partnership records discounts as a reduction of revenue.

Cost of revenue

Cost of revenue is comprised of direct and certain indirect costs incurred to generate revenue. For direct revenue transactions, cost of revenue includes the cost of inventory, shipping and fulfillment costs and inventory markdowns. Fulfillment costs are comprised of third party logistics provider costs, as well as rent, depreciation, personnel costs and other costs of operating the Partnership's fulfillment center. Other costs incurred to generate revenue, which include credit card processing fees, editorial costs, certain technology costs, web hosting and other processing fees, are attributed to cost of third party revenue, direct revenue and other revenue in proportion to gross billings during the period.

Technology costs within cost of revenue consist of compensation expense related to technology support personnel who are responsible for operating and maintaining the infrastructure of the Partnership's websites.

Customer Credits

The Partnership issues credits to its customers that can be applied against future purchases through its online local marketplaces for certain qualifying acts, such as referring new customers. The Partnership has recorded its customer credit obligations within "Accrued expenses and other current liabilities" on the consolidated balance sheet (Note 6, "*Accrued Expenses and Other Current Liabilities*"). Customer credit obligations incurred for new customer referrals or other qualifying acts are expensed as incurred and are classified within "Marketing" on the consolidated statement of operations.

Refunds

At the time revenue is recorded, the Partnership records an accrual for estimated refunds primarily based on the Partnership's historical experience with refunds. Refunds are recorded as a reduction of revenue. The Partnership accrues costs associated with refunds within "Accrued expenses and other current liabilities" on the consolidated balance sheet. The Partnership assesses the trends that could affect its estimates on an ongoing basis and makes adjustments to the refund reserve calculations if it appears that changes in circumstances, including changes to the Partnership's refund policies, may cause future refunds to differ from its original estimates. If actual results are not consistent with the estimates or assumptions stated above, the Partnership may need to change its future estimates, and the effects could be material to the consolidated financial statements.

Unit-Based Compensation

The Partnership's Class C units have been authorized for issuance as unit-based awards to compensate its employees for future service. The Partnership measures unit-based compensation cost at fair value, net of estimated forfeitures. Expense is recognized on a straight-line basis over the service period during which awards are expected to vest, except for awards with both performance conditions and a graded vesting schedule, which are recognized using the accelerated method. For the period from May 27, 2015 through December 31, 2015, the Partnership did not incur any unit-based compensation expense except for \$0.3 million related to Groupon restricted stock units as discussed in Note 11, *Related Party Transactions*.

Foreign Currency

Balance sheet accounts of the Partnership's operations outside of the U.S. are translated from foreign currencies into U.S. dollars at the exchange rates as of the consolidated balance sheet dates. Revenue and expenses are translated at average exchange rates during the period. Foreign currency translation adjustments are included within "Accumulated other comprehensive loss" on the consolidated balance sheet. Foreign currency gains and losses resulting from transactions which are denominated in currencies other than the entity's functional currency are included within "Other income, net" on the consolidated statement of operations. The gains associated with foreign currency transactions were \$3.1 million for the period from May 27, 2015 through December 31, 2015.

Monster Holdings LP**Notes to Consolidated Financial Statements****For the Period from May 27, 2015 through December 31, 2015*****Fair Value Measurements***

The Partnership's financial assets and liabilities include restricted cash, prepaid expenses and other current assets, accounts receivable, accounts payable, accrued merchant and supplier payables, accrued expenses and other current liabilities. The carrying values of these assets and liabilities approximate their fair values due to their short-term nature.

The Partnership had no non-recurring fair value measurements after initial recognition and no recurring fair value measurements for the period from May 27, 2015 through December 31, 2015.

Recently Issued Accounting Standards

In May 2014, the Financial Accounting Standards Board ("FASB") issued ASU 2014-09, *Revenue from Contracts with Customers*. This ASU is a comprehensive new revenue recognition model that requires a company to recognize revenue to depict the transfer of goods or services to a customer at an amount that reflects the consideration it expects to receive in exchange for those goods or services. The ASU is effective for annual reporting periods beginning after December 15, 2017 and interim periods within those annual periods. The Partnership is still assessing the impact of ASU 2014-09 on its consolidated financial statements.

In April 2015, the FASB issued ASU 2015-05, *Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40) - Customer's Accounting for Fees Paid in a Cloud Computing Arrangement*. This ASU provides guidance to customers about whether a cloud computing arrangement contains a software license. The ASU is effective for annual reporting periods, beginning after December 15, 2015 and interim periods within those annual periods. While the Partnership is still assessing the impact of ASU 2015-04, it does not expect that the adoption of this guidance will have a material impact on its consolidated financial statements.

In July 2015, the FASB issued ASU 2015-11, *Inventory (Topic 330) - Simplifying the Measurement of Inventory*. This ASU requires inventory to be measured at the lower of cost or net realizable value, rather than the lower of cost or market. The ASU is effective for annual reporting periods beginning after December 15, 2016 and interim periods within those annual periods. While the Partnership is still assessing the impact of ASU 2015-11, it does not believe that the adoption of this guidance will have a material impact on its consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. The ASU will require lessees to recognize assets and liabilities arising from leases, including operating leases, to be recognized on the balance sheet. The ASU is effective for annual reporting periods beginning after December 15, 2018 and interim periods within those annual periods. The Partnership is still assessing the impact of adoption on its consolidated financial statements.

There are no other accounting standards that have been issued but not yet adopted that the Partnership believes could have a material impact on its consolidated financial position or results of operations.

3. BUSINESS COMBINATIONS

The acquisition of all of the outstanding equity interests of LSK, the holding company of Ticket Monster (the "Ticket Monster acquisition"), was accounted for using the acquisition method, and the results of that business have been included in the consolidated financial statements beginning on the May 27, 2015 acquisition date. The fair value of consideration transferred in the business combination has been allocated to the tangible and intangible assets acquired and liabilities assumed at the acquisition date, with the remaining unallocated amount recorded as goodwill. Acquired goodwill represents the premium the Partnership paid over the fair value of the net tangible and intangible assets acquired. The Partnership paid this premium for a number of reasons, including acquiring an assembled workforce. The goodwill from the business combinations is not deductible for tax purposes.

The aggregate acquisition-date fair value of the consideration transferred for the Ticket Monster acquisition totaled \$413.6 million, which consisted of the following (in thousands):

Monster Holdings LP**Notes to Consolidated Financial Statements****For the Period from May 27, 2015 through December 31, 2015**

Cash	\$	285,000
Issuance of 64,000,000 Class B units		128,607
Total	\$	<u>413,607</u>

The fair value of the Class B units issued as consideration was measured as of the closing of the transaction on May 27, 2015. The initial fair value was determined using the backsolve valuation method, which is a form of the market approach. Under this method, assumptions are made about the expected time to liquidity, volatility and risk-free rate such that the price paid by a third-party investor in a recent financing round can be used to determine the value of the entity and its other securities using option-pricing methodologies. The fair value of the Class B units was based on the contractual liquidation preferences and the following valuation assumptions: 4-year expected time to a liquidity event, 60% volatility and a 1.3% risk-free rate.

The following table summarizes the allocation of the aggregate acquisition price of the Ticket Monster acquisition (in thousands):

Cash and cash equivalents	\$	37,516
Accounts receivable		6,813
Prepaid expenses and other current assets		18,866
Property, equipment and software		7,884
Goodwill		377,001
Intangible assets: ⁽¹⁾		
Customer relationships		58,278
Merchant relationships		23,582
Developed technology		994
Trade name		47,887
Other non-current assets		3,193
Total assets acquired	\$	<u>582,014</u>
Accounts payable	\$	9,239
Accrued merchant and supplier payables		137,167
Accrued expenses and other current liabilities		14,942
Other non-current liabilities		7,059
Total liabilities assumed	\$	<u>168,407</u>
Total acquisition price	\$	<u><u>413,607</u></u>

(1) The estimated useful lives of the acquired intangible assets are 7 years for customer relationships, 3 years for merchant relationships, 2 years for developed technology and 12 years for trade name.

Monster Holdings LP**Notes to Consolidated Financial Statements****For the Period from May 27, 2015 through December 31, 2015****4. PROPERTY, EQUIPMENT AND SOFTWARE, NET***(in thousands)*

	December 31, 2015
Purchased software	\$ 2,584
Office furniture and equipment	5,258
Internally-developed software	4,364
Leasehold improvements	950
Construction in progress	489
Total property, equipment and software, gross	13,645
Less: Accumulated depreciation and amortization	(2,192)
Total property, equipment and software, net	\$ 11,453

Depreciation and amortization expense on property, equipment and software for the period from May 27, 2015 through December 31, 2015 was \$2.6 million, which includes \$0.6 million of internally-developed software amortization, and is primarily included within "Selling, general and administrative expenses" on the consolidated statement of operations.

5. GOODWILL AND INTANGIBLE ASSETS*Goodwill*

The following table summarizes the Partnership's goodwill activity for the period from May 27, 2015 through December 31, 2015:

(in thousands)

Balance as of May 27, 2015	\$ —
Goodwill related to acquisition	377,001
Foreign currency translation	(21,900)
Balance as of December 31, 2015	\$ 355,101

The Partnership evaluates goodwill for impairment annually on December 31 or more frequently when an event occurs or circumstances change that indicates the carrying value may not be recoverable. No goodwill impairments were recognized for the period from May 27, 2015 through December 31, 2015.

Intangible Assets

The carrying amounts of definite lived intangible assets consist of the following:

(in thousands)

	December 31, 2015		
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Customer relationships	\$ 54,782	\$ (4,674)	\$ 50,108
Merchant relationships	22,168	(4,413)	17,755
Developed technology	934	(279)	655
Trade name	45,121	(2,240)	42,881
Total intangible assets	\$ 123,005	\$ (11,606)	\$ 111,399

Monster Holdings LP**Notes to Consolidated Financial Statements****For the Period from May 27, 2015 through December 31, 2015**

Amortization of intangible assets is computed using the straight-line method over their estimated useful lives, which range from 2 to 12 years. Amortization expense related to intangible assets was approximately \$11.8 million for the period from May 27, 2015 through December 31, 2015. The weighted average remaining amortization period of intangible assets is 7.7 years as of December 31, 2015. As of December 31, 2015, the Partnership's estimated future amortization expense related to intangible assets is as follows:

(in thousands)

Years Ended December 31,	Amount
2016	\$ 19,541
2017	19,155
2018	14,553
2019	11,577
2020	11,577
Thereafter	34,996
Total	\$ 111,399

6. SUPPLEMENTAL CONSOLIDATED BALANCE SHEET INFORMATION

The following summarizes the Partnership's prepaid expenses and other current assets as of December 31, 2015:

(in thousands)

	December 31,
	2015
Finished goods inventories	\$ 19,113
Prepaid expenses	13,288
Restricted cash	16,367
Total prepaid expenses and other current assets	\$ 48,768

The following summarizes the Partnership's accrued expenses and other current liabilities as of December 31, 2015:

(in thousands)

	December 31,
	2015
Customer credits	\$ 2,668
Refunds	597
Accrued compensation and benefits	7,021
Deferred revenue	3,545
Other	7,623
Total accrued expenses and other current liabilities	\$ 21,454

7. CREDIT FACILITY

The Partnership has entered into a revolving credit facility (the "credit facility") that provides for aggregate principal borrowings of \$8.5 million. The credit facility expires on July 14, 2016. Borrowings under the credit facility bear interest at the Certificate of Deposit Rate for the Republic of Korea plus 3.30%. As of December 31, 2015, the Partnership had no borrowings outstanding under the credit facility.

Monster Holdings LP**Notes to Consolidated Financial Statements****For the Period from May 27, 2015 through December 31, 2015****8. COMMITMENTS AND CONTINGENCIES***Operating Leases*

The Partnership has entered into various non-cancelable operating lease agreements, primarily covering certain of its offices in the Republic of Korea, with lease expirations between 2016 and 2017. Rent expense under these operating leases was \$2.7 million for the period from May 27, 2015 through December 31, 2015. Certain of these arrangements have renewal or expansion options and adjustments for market provisions, such as free or escalating base monthly rental payments. The Partnership recognizes rent expense under such arrangements on a straight-line basis over the initial term of the lease. The difference between the straight-line expense and the cash paid for rent has been recorded as deferred rent.

As of December 31, 2015, future payments under non-cancelable operating leases (including rent escalation clauses but excluding a proportionate share of operating expenses) were as follows:

(in thousands)

Years Ended December 31,	Operating Leases
2016	\$ 7,055
2017	3,493
Thereafter	—
Total	\$ 10,548

Contingencies

The Partnership recognizes accrued liabilities for loss contingencies when the loss is determined to be both probable and estimable. Such accruals represent the Partnership's best estimate of probable losses and, in some cases, there may be an exposure to loss in excess of the amounts accrued. The Partnership believes that the amount of reasonably possible losses in excess of the amounts accrued for loss contingencies as of December 31, 2015 would not have a material adverse effect on its business, financial position, results of operations or cash flows.

The Partnership has provided customary indemnifications to its unit holders and their affiliates for claims that may arise in connection with their involvement with the Partnership. The indemnifications do not limit the maximum potential future payments that can be made and it is not possible to determine an estimate of those maximum potential future payments due to the absence of historical claim experience.

9. PARTNERS' CAPITAL

On May 26, 2015, the Partnership received a \$350.0 million capital contribution from Monster Partners LP, an entity jointly owned by affiliates of Kohlberg, Kravis Roberts & Co. L.P. ("KKR") and Anchor Equity Partners (Asia) Limited ("Anchor"), in exchange for 70,000,000 Class A units of the Partnership. On May 27, 2015, a wholly-owned subsidiary of Groupon transferred all of the issued and outstanding share capital of LSK, the holding company of Ticket Monster, to the Partnership in exchange for 64,000,000 Class B units of the Partnership and \$285.0 million in cash consideration. Subsequently, an entity affiliated with Mr. Daniel Shin, the founder and current chief executive officer of Ticket Monster, contributed an additional \$10.0 million in cash consideration to the Partnership in exchange for 2,000,000 Class A units of the Partnership. The Partnership is authorized to issue 20,321,839 Class C units to its management that will be subject to vesting conditions. No Class C units were issued or granted during the period from May 27, 2015 through December 31, 2015.

Under the terms of the Partnership's amended and restated agreement of limited partnership, its general partner, Monster Holdings GP LLC, established a Board of Directors (the "Board") and irrevocably assigned the rights to carry out any and all of the objectives and purposes of the Partnership to the Board. The general partner is not entitled to receive any distributions. Holders of Class A units of the Partnership are entitled to a \$486.0 million liquidation preference, which must be paid prior to any distributions to the holders of Class B and Class C units. All distributions in excess of \$486.0 million and up to \$680.0 million will be paid to

Monster Holdings LP**Notes to Consolidated Financial Statements****For the Period from May 27, 2015 through December 31, 2015**

holders of Class B units. Distributions in excess of \$680.0 million and up to \$703.0 million will be paid to holders of any outstanding Class C units. Unit holders will be entitled to share in distributions between \$703.0 million and \$1,116.0 million in accordance with the terms of the Partnership's distribution waterfall, and distributions in excess of \$1,116.0 million will be made pro rata to all unit holders based on their respective ownership interests. Due to the Class A unit liquidation preference, the Partnership's net loss for the period from May 27, 2015 through December 31, 2015 has been allocated to the Class B units in the accompanying consolidated statement of changes in partners' capital. Holders of Class A and Class B units are entitled to one vote per unit and vote together as a single class. Holders of Class C units will not be entitled to any voting rights.

10. INCOME TAXES

Domestic and foreign components of loss from operations before income taxes are presented below:

<i>(in thousands)</i>	Period from May 27, 2015 through December 31, 2015
Earnings before income taxes - U.S.	\$ 196
Loss before income taxes - Korea	(108,115)
Total loss before income taxes	<u>\$ (107,919)</u>

For U.S. Federal income tax purposes, the Partnership is a pass-through entity and all applicable U.S. income taxes are the responsibility of the partners. However, its subsidiaries are subject to income taxes in the Republic of Korea. The provision for income taxes in the Republic of Korea consists of the following:

<i>(in thousands)</i>	Period from May 27, 2015 through December 31, 2015
Current income tax provision (benefit)	\$ —
Deferred income tax provision (benefit)	—
Total provision (benefit) for income taxes	<u>\$ —</u>

The items accounting for differences between the income tax provision or benefit computed at the applicable Korean statutory rate of 11% and the provision for income taxes for the period from May 27, 2015 through December 31, 2015 are as follows:

<i>(in thousands)</i>	Period from May 27, 2015 through December 31, 2015
Income tax benefit at statutory rate	\$ (11,871)
Change in valuation allowance	11,834
Other	37
Total provision (benefit) for income taxes	<u>\$ —</u>

Deferred income tax assets and liabilities of the Partnership's Korean subsidiaries, which include net operating losses generated prior to the Partnership's acquisition of those subsidiaries, consisted of the following:

Monster Holdings LP**Notes to Consolidated Financial Statements****For the Period from May 27, 2015 through December 31, 2015**

<i>(in thousands)</i>	December 31, 2015
Deferred tax assets:	
Accrued expenses and other liabilities	\$ 2,323
Net operating loss and tax credit carryforwards	30,183
Property, equipment and software, net	120
Other	26
Total deferred tax assets	32,652
Less valuation allowances	(20,319)
Deferred tax assets, net of valuation allowance	12,333
Deferred tax liabilities:	
Intangible assets, net	12,256
Other	77
Deferred tax liabilities	12,333
Net deferred tax asset (liability)	\$ —

Significant judgment is required in determining the provision for income taxes and recording the related income tax assets and liabilities. The Partnership recognizes the financial statement benefit of a tax position only after determining that the relevant tax authority would more-likely-than-not sustain the position following an audit. For tax positions meeting the more-likely-than-not criterion, the amount recognized in the financial statements is the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate settlement with the relevant tax authority.

The Partnership has recognized valuation allowances to reduce its deferred tax assets to amounts that are realizable through future reversals of existing taxable temporary differences.

The Partnership is subject to income tax audits in all jurisdictions for which it files tax returns. Tax audits by their very nature are often complex and can require several years to complete. Neither the Partnership nor any of its subsidiaries is currently under audit in any jurisdiction. The years 2013 to 2015 remain open for examination by the tax authorities in the Republic of Korea. There are no uncertain tax positions recorded at December 31, 2015 and there were no interest or penalties recognized related to uncertain tax positions for the period from May 27, 2015 through December 31, 2015.

As of December 31, 2015, the Partnership's Korean subsidiaries had \$274.4 million of net operating loss carryforwards, which begin expiring in 2021.

11. RELATED PARTY TRANSACTIONS

Certain Ticket Monster employees continue to vest in share-based awards granted by Groupon as a result of their employment with Ticket Monster. These restricted stock units are remeasured to fair value each reporting period. The Partnership has recorded \$0.3 million of compensation expense within "Selling, general and administrative expenses" on the consolidated statement of operations as a result of that arrangement. As of December 31, 2015, 377,256 Groupon restricted stock units are outstanding, which will result in approximately \$1.2 million of future compensation expense based on the fair value of the unvested awards at that date and is expected to be recognized over a remaining weighted average period of 1.7 years.

The Partnership has entered into an arrangement to receive advisory services from KKR and Anchor. Under that arrangement, which is cancelable only with the consent of the counterparties, the Partnership will incur advisory costs of approximately \$1.5 million per year. The Partnership incurred \$0.9 million of advisory costs under this arrangement for the period from May 27, 2015 through December 31, 2015, which are included within "Selling, general and administrative" in the accompanying consolidated statement of operations. There were \$0.6 million of amounts due to the counterparties under this

Monster Holdings LP

Notes to Consolidated Financial Statements

For the Period from May 27, 2015 through December 31, 2015

arrangement as of December 31, 2015, which are included within "Accrued expenses and other current liabilities" in the accompanying consolidated balance sheet.

During 2015, Groupon sold 2,529,998 Class B units for \$4.8 million to an entity affiliated with Mr. Daniel Shin and other employees of Ticket Monster.

12. SUBSEQUENT EVENTS

On January 4, 2016, the Partnership granted 20,321,839 Class C restricted units to employees of Ticket Monster. Those Class C restricted units had a total grant date fair value of approximately \$23.8 million, are subject to time-based vesting conditions and, for a portion of the Class C units, a performance-based vesting condition.

On March 22, 2016, the Partnership's wholly-owned subsidiary LSK was merged into its wholly-owned subsidiary Ticket Monster. This merger of consolidated subsidiaries has no impact on the consolidated financial statements.

The Partnership has evaluated subsequent events from the balance sheet date through March 30, 2016, the date at which the consolidated financial statements were available to be issued, and determined that there are no other items to disclose.

ITEM 9: CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES*Evaluation of Disclosure Controls and Procedures*

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act), as of the end of the period covered by this Annual Report on Form 10-K.

Based on this evaluation, our management concluded that, as of December 31, 2016, our disclosure controls and procedures are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) of the Exchange Act. Our management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Our internal control over financial reporting includes policies and procedures that provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with U.S. generally accepted accounting principles. Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2016. Management reviewed the results of its assessment with our Audit Committee. The effectiveness of our internal control over financial reporting as of December 31, 2016 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in its report which is included below.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the quarter ended December 31, 2016 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Groupon, Inc.

We have audited Groupon, Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Groupon, Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Groupon, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Groupon, Inc. as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2016, and our report dated February 15, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP
Chicago, Illinois
February 15, 2017

ITEM 9B: OTHER INFORMATION

On February 14, 2017, in connection with its annual compensation review process, the Compensation Committee of the Board approved awards of restricted stock units ("RSUs") and performance share units ("PSUs") to certain of the Company's named executive officers and approved the performance terms for the 2017 PSUs, which are described below. The awards for 2017 and award opportunities for 2018 and 2019 to the following named executive officers are set forth below:

Target PSUs			
Name	RSUs	Year	Number
Mike Randolfi Chief Financial Officer	182,741	2018	38,559 ¹
		2019	83,269
Dane Drobný Senior Vice President and General Counsel	211,667	2017	13,334 ²
		2018	30,992
		2019	96,786
Brian Stevens Chief Accounting Officer and Treasurer	117,227	2017	6,936 ³
		2018	43,304

(1) An additional 55,000 and 47,143 target PSUs for 2017 and 2018, respectively, were previously approved and disclosed.

(2) An additional 14,458 target PSUs for 2017 were previously approved and disclosed.

(3) An additional 17,736 target PSUs for 2017 were previously approved and disclosed.

The RSUs are subject to the Company's standard terms and vest as follows: Mr. Randolfi - 57,838 RSUs vest in equal installments quarterly beginning on June 15, 2018 and ending on March 15, 2019 and 124,903 RSUs vest in equal installments quarterly beginning on June 15, 2019 and ending on March 15, 2020; Mr. Drobný - 10,000 RSUs vest on September 15, 2017, 5,000 RSUs vest on each of December 15, 2017 and March 15, 2018, 46,487 RSUs vest in equal installments quarterly beginning on June 15, 2018 and ending on March 15, 2019, and 145,180 RSUs vest in equal installments quarterly beginning on June 15, 2019 and ending on March 15, 2020; and Mr. Stevens - 8,092 RSUs vest on September 15, 2017, 4,046 RSUs vest on each of December 15, 2017 and March 15, 2018, and 101,043 RSUs vest in equal installments quarterly beginning on June 15, 2018 and ending on March 15, 2019.

All of the PSUs granted for 2017 may be earned, if at all, in an amount ranging from 50% to 200% of the target award depending on the achievement of certain levels of the following equally weighted performance objectives in 2017: Gross Billings; Free Cash Flow; Customer Growth; and strategic goals. The performance goals and terms for the 2018 PSUs and 2019 PSUs will be established by the Compensation Committee and the corresponding awards will be granted within the first 90 days of 2018 and 2019, respectively.

PART III**ITEM 10: DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

Information regarding the Directors of the Company is incorporated by reference from the information under the captions "Board of Directors" and "Corporate Governance at Groupon" in the Company's Proxy Statement for the 2017 Annual Meeting of Stockholders. Information regarding the Audit Committee and its Financial Experts is incorporated by reference from the information under the captions "Board Committees" and "Audit Committee Report" in the Company's Proxy Statement for the 2017 Annual Meeting of Stockholders, which will be filed with the SEC within 120 days of December 31, 2016. Information regarding the Executive Officers of the Company can be found in Part I of this Annual Report on Form 10-K. Information regarding compliance with Section 16(a) of the Exchange Act is incorporated by reference from the information under the caption "Section 16(a) Beneficial Ownership Reporting Compliance" in the Company's Proxy Statement for the 2017 Annual Meeting of Stockholders, which will be filed with the SEC within 120 days of December 31, 2016.

Code of Ethics

We have adopted a Code of Conduct, which is applicable to our chief executive officer, chief financial officer and other principal executive and senior financial officers. Our Code of Conduct is available through our website (www.groupon.com). Information about the Code of Conduct is incorporated by reference from the information under the caption "Corporate Governance at Groupon" in the Company's Proxy Statement for the 2017 Annual Meeting of Stockholders, which will be filed with the SEC within 120 days of December 31, 2016. We will post any amendment to or waiver from the provisions of the Code of Conduct that applies to the above executive officers on our website (www.groupon.com) under the caption "Corporate Governance."

ITEM 11: EXECUTIVE COMPENSATION

Incorporated by reference from the information under the captions "Named Executive Officer Compensation," "Director Compensation," "Compensation Discussion and Analysis," "Compensation Committee Interlocks and Insider Participation" and "Compensation Committee Report" in our Proxy Statement for our 2017 Annual Meeting of Stockholders, which will be filed with the SEC within 120 days of December 31, 2016.

ITEM 12: SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Incorporated by reference from the information under the captions "Information Regarding Beneficial Ownership of Principal Stockholders, Directors and Management" and "Equity Compensation Plan Information" in our Proxy Statement for our 2017 Annual Meeting of Stockholders, which will be filed with the SEC within 120 days of December 31, 2016.

ITEM 13: CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Incorporated by reference from the information under the captions "Corporate Governance at Groupon," "Board Independence" and "Certain Relationships and Related Party Transactions" in our Proxy Statement for our 2017 Annual Meeting of Stockholders, which will be filed with the SEC within 120 days of December 31, 2016.

ITEM 14: PRINCIPAL ACCOUNTANT FEES AND SERVICES

Incorporated by reference from the information under the caption "Ratification of the Independent Registered Public Accounting Firm" in our Proxy Statement for our 2017 Annual Meeting of Stockholders, which will be filed with the SEC within 120 days of December 31, 2016.

PART IV

ITEM 15: EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(1) We have filed the following documents as part of the Annual Report on Form 10-K

Groupon, Inc.
Consolidated Financial Statements
As of December 31, 2016 and 2015 and for the Years Ended December 31, 2016, 2015 and 2014

Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets

Consolidated Statements of Operations

Consolidated Statements of Comprehensive Income (Loss)

Consolidated Statements of Stockholders' Equity

Consolidated Statements of Cash Flows

Notes to Consolidated Financial Statements

Monster Holdings LP
Consolidated Financial Statements
As of December 31, 2015 and for the Period from May 27, 2015 through December 31, 2015

Report of Independent Auditors

Consolidated Balance Sheet

Consolidated Statement of Operations

Consolidated Statement of Comprehensive Loss

Consolidated Statement of Changes in Partners' Capital

Consolidated Statement of Cash Flows

Notes to Consolidated Financial Statements

(2) Financial Statement Schedules - Groupon, Inc.

Schedule II-Valuation and Qualifying Accounts

	Balance at Beginning of Year	Charged to Expense	Acquisitions and Other	Balance at End of Year
	(in thousands)			
TAX VALUATION ALLOWANCE:				
Year ended December 31, 2016	230,288	16,184	1,798	248,270
Year ended December 31, 2015	194,785	48,215	(12,712)	230,288
Year ended December 31, 2014	173,577	19,094	2,114	194,785

All other schedules have been omitted because they are either inapplicable or the required information has been provided in the consolidated financial statements or in the notes thereto.

(3) Exhibits (i) See the Exhibit Index immediately following the signature page of this Annual Report on Form 10-K.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on this 15th day of February 2017.

GROUPON, INC.

By: /s/ RICH WILLIAMS

Name: Rich Williams

Title: *Chief Executive Officer*

POWER OF ATTORNEY

KNOWN BY ALL PERSONS BY THESE PRESENTS, that the individuals whose signatures appear below hereby constitute and appoint Rich Williams, Michael Randolfi and Brian C. Stevens, and each of them severally, as his or her true and lawful attorneys-in-fact and agents with full power of substitution and resubstitution for him or her and in his or her name, place and stead in any and all capacities to sign any and all amendments to this Annual Report on Form 10-K and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, full power and authority to do or perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or of his substitute or substitutes, may lawfully do to cause to be done by virtue hereof. Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the registrant and in the capacities indicated as of February 15, 2017.

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on this 15th day of February 2017.

<u>Signature</u>	<u>Title</u>
_____ /s/ Rich Williams Rich Williams	Chief Executive Officer and Director (Principal Executive Officer)
_____ /s/ Michael Randolfi Michael Randolfi	Chief Financial Officer (Principal Financial Officer)
_____ /s/ Brian C. Stevens Brian C. Stevens	Chief Accounting Officer and Treasurer (Principal Accounting Officer)
_____ /s/ Eric Lefkofsky Eric Lefkofsky	Director
_____ /s/ Michael Angelakis Michael Angelakis	Director
_____ /s/ Peter J. Barris Peter J. Barris	Director
_____ /s/ Robert J. Bass Robert J. Bass	Director
_____ /s/ Jeffrey T. Housenbold Jeffrey T. Housenbold	Director
_____ /s/ Bradley A. Keywell Bradley A. Keywell	Director
_____ /s/ Theodore J. Leonsis Theodore J. Leonsis	Director
_____ /s/ Ann E. Ziegler Ann E. Ziegler	Director

EXHIBITS

Exhibit Number	Description
2.1	Investment Agreement, dated as of April 19, 2015, among Groupon Trailblazer, Inc., Monster Partners LP and Monster Holdings LP (incorporated by reference to the Company's Current Report on Form 8-K filed April 20, 2015).
3.1	Restated Certificate of Incorporation of the Company (incorporated by reference to Exhibit 3.2 to the Registration Statement on Form 8-A/A filed by the Company on October 31, 2016).
3.2*	Amended and Restated By-Laws.
3.3	Amendment to the Amended and Restated By-Laws of the Company, dated as of June 10, 2016 (incorporated by reference to the Company's Current Report on Form 8-K filed on June 14, 2016).
4.1	Specimen Stock Certificate of Common Stock (incorporated by reference to Exhibit 4.1 to the Registration Statement on Form 8-A/A filed by the Company on October 31, 2016).
4.2	Indenture, dated April 4, 2016, between the Company and U.S. Bank, National Association, as trustee (incorporated by reference to the Company's Current Report on Form 8-K filed on April 4, 2016).
10.1*	2008 Stock Option Plan.**
10.2*	Form of Notice of Grant of Stock Option under 2008 Stock Option Plan.**
10.3*	2010 Stock Plan.**
10.4*	Form of Notice of Grant of Stock Option under 2010 Stock Plan.**
10.5*	Form of Notice of Restricted Stock Unit Award under 2010 Stock Plan.**
10.6	Letter Agreement, dated as of May 4, 2015, between the Company and Eric Lefkofsky (incorporated by reference to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2015).**
10.7	Letter Agreement, dated as of May 11, 2014, between the Company and Dane Drobny (incorporated by reference to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2014).**
10.8	Letter Agreement, dated as of November 3, 2015, between the Company and Rich Williams (incorporated by reference to the Company's Current Report on Form 8-K filed on November 3, 2015).**
10.9	Letter Agreement, dated as of April 19, 2016, between the Company and Michael Randolfi (incorporated by reference to the Company's Current Report on Form 8-K filed on April 28, 2016).**
10.10*	Form of Indemnification Agreement**
10.11	Form of Notice of Restricted Stock Award under 2011 Incentive Plan (incorporated by reference to the Company's Annual Report on Form 10-K for the year ended December 31, 2012).**
10.12	Form of Severance Benefit Agreement as entered into between Groupon, Inc. and its executive officers (incorporated by reference to the Company's Current Report on Form 8-K filed on August 7, 2013).**
10.13	Severance Benefit Agreement, dated April 26, 2016, between the Company and Rich Williams.**
10.14	2011 Incentive Plan, as amended and restated effective as of October 31, 2016 (incorporated by reference to the Company's Annual Report on Form 10-K for the year ended October 31, 2016).**
10.15	Non-Employee Directors' Compensation Plan (incorporated by reference to the Company's Annual Report on Form 10-K for the year ended December 31, 2014).**
10.16	Form of Notice of Performance Share Unit Award and Form of Performance Share Unit Award Agreement under 2011 Incentive Plan.**
10.17	Investment Agreement, dated April 3, 2016, between the Company and A-G Holdings, L.P. (incorporated by reference to the Company's Current Report on Form 8-K filed on April 4, 2016).
10.18	Voting Agreement, dated April 4, 2016, among the Company, A-G Holdings, L.P. and the stockholders party thereto (incorporated by reference to the Company's Current Report on Form 8-K filed on April 4, 2016).
10.19	Form of Note Hedge Confirmation, dated May 9, 2016, between the Company and each of the counterparties thereto (incorporated by reference to the Company's Current Report on Form 8-K filed on May 9, 2016).
10.20	Form of Warrant Confirmation, dated May 9, 2016, between the Company and each of the counterparties thereto (incorporated by reference to the Company's Current Report on Form 8-K filed on May 9, 2016).
10.21	Amended and Restated Credit Agreement, dated as of June 29, 2016, among the Company, JPMorgan Chase Bank, N.A., as Administrative Agent, and the lenders party thereto (incorporated by reference to the Company's Current Report on Form 8-K filed on July 1, 2016).
21.1	Subsidiaries of Groupon, Inc.
23.1	Consent of Ernst & Young LLP
23.2	Consent of Ernst & Young Han Young
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

31.2 Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

32.1 Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

101.INS XBRL Instance Document

101.SCH XBRL Taxonomy Extension Schema Document

101.CAL XBRL Taxonomy Extension Calculation Linkbase Document

101.DEF XBRL Taxonomy Extension Definition Linkbase Document

101.LAB XBRL Taxonomy Extension Label Linkbase Document

101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

* Incorporated by reference to the Company's registration statement on Form S-1 (registration number 333-174661)

** Management contract or compensatory plan or arrangement.

<u>Subsidiary</u>	<u>Jurisdiction</u>
Groupon Canada Inc.	Canada
Groupon Activities, LLC	Delaware (U.S.A.)
Groupon Distribution Services, LLC	Delaware (U.S.A.)
LivingSocial, Inc.	Delaware (U.S.A.)
LivingSocial Services, LLC	Virginia (U.S.A.)
GI International Holdings, Inc.	Delaware (U.S.A.)
Groupon Canada Corp, Inc.	Delaware (U.S.A.)
Groupon Getaways, Inc.	Delaware (U.S.A.)
Groupon Goods, Inc.	Delaware (U.S.A.)
Groupon Product Services, LLC	Delaware (U.S.A.)
Groupon Trailblazer, Inc.	Delaware (U.S.A.)
GrouponLive, LLC	Delaware (U.S.A.)
Needish, Inc.	Delaware (U.S.A.)
LocalUp LLC	Delaware (U.S.A.)
OrderUp, Inc.	Delaware (U.S.A.)
Obtiva, Inc.	Delaware (U.S.A.)
Needish S.R.L.	Illinois (U.S.A.)
Groupon Servicos Digitais Ltda.	Argentina
Needish Ltda.	Brazil
Groupon Colombia S.A.S.	Chile
Needish Mexico S.A. de R.L. de C.V.	Columbia
Needish Peru S.A.	Mexico
GROUPON S.P.R.L.	Peru
Groupon France SAS	Belgium
Groupon Goods France	France
Groupon Europe GmbH	France
Groupon Germany GbR	Germany
Groupon Goods Germany GmbH	Germany
Groupon International Ltd.	Germany
Groupon-CityDeal (Ireland) Ltd.	Ireland
Grouper Social Shopping Ltd.	Ireland
Groupon Goods Italy Srl	Israel
Groupon S.r.l.	Italy
GI Luxembourg S.a.r.l	Italy
Groupon SARL	Luxemborg
Groupon Goods Netherlands B.V.	Morocco
Groupon Holdings B.V.	Netherlands
Groupon Netherlands B.V.	Netherlands
Groupon Goods Poland sp. Z.o.o.	Netherlands
Groupon Sp.z o.o.	Poland
Groupon Shared Services Poland Sp z.o.o.	Poland
Groupon Spain, SLU	Poland
Groupon Goods Global GmbH	Spain
Groupon International GmbH	Switzerland
Groupon International Travel GmbH	Switzerland
Groupon FZ-LLC	Switzerland
Groupon Goods UK Ltd.	United Arab Emeritas
Groupon Shop Ltd.	United Kingdom
MyCity Deal Ltd.	United Kingdom
Groupon Australia Pty Ltd	United Kingdom
Groupon Getaways Pty Ltd	Australia
Our Deal Pty Ltd	Australia
Shift Media Group, Limited	Australia
Groupon Shared Services Private Limited	Hong Kong
Groupon Japan, Inc.	India
Groupon Service, Inc.	Japan
Groupon New Zealand Limited	Japan
Beeconomic Singapore Pte. Ltd.	New Zealand
Groupon Goods Asia Pte. Ltd.	Singapore
	Singapore

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in (1) the Registration Statement (Form S-8 No. 333-214351) pertaining to the 2012 Employee Stock Purchase Plan, 2011 Incentive Plan, 2010 Stock Plan, and 2008 Stock Option Plan of Groupon, Inc. and (2) the Registration Statement (Form S-3 ASR No. 333-202060) of Groupon, Inc. of our reports dated February 15, 2017, with respect to the consolidated financial statements and schedule of Groupon, Inc., and the effectiveness of internal control over financial reporting of Groupon, Inc., included in this Annual Report (Form 10-K) for the year ended December 31, 2016.

/s/ Ernst & Young LLP
Chicago, Illinois
February 15, 2017

Consent of Independent Auditors

We consent to the incorporation by reference in (1) the Registration Statement (Form S-8 No. 333-214351) pertaining to the 2012 Employee Stock Purchase Plan, 2011 Incentive Plan, 2010 Stock Plan, and 2008 Stock Option Plan of Groupon, Inc. and (2) the Registration Statement (Form S-3 ASR No. 333-202060) of Groupon, Inc. of our report dated March 30, 2016, with respect to the consolidated financial statements of Monster Holdings LP, included in this Annual Report (Form 10-K) for the year ended December 31, 2016.

/s/ Ernst & Young Han Young
Seoul, Republic of Korea
February 15, 2017

CERTIFICATION

I, Rich Williams, certify that:

1. I have reviewed this Annual Report on Form 10-K of Groupon, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading, with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 15, 2017

/s/ Rich Williams

Rich Williams
Chief Executive Officer
(Principal Executive Officer)

CERTIFICATION

I, Michael Randolfi, certify that:

1. I have reviewed this Annual Report on Form 10-K of Groupon, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading, with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 15, 2017

/s/ Michael Randolfi

Michael Randolfi
Chief Financial Officer
(Principal Financial Officer)

**Certifications Pursuant to
18 U.S.C. Section 1350
As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the Annual Report of Groupon, Inc. (the "Company") on Form 10-K for the period ended December 31, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Rich Williams, Chief Executive Officer of the Company, and Michael Randolfi, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to our knowledge, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ Rich Williams
Rich Williams
Chief Executive Officer
(Principal Executive Officer)

By: /s/ Michael Randolfi
Michael Randolfi
Chief Financial Officer
(Principal Financial Officer)

Date: February 15, 2017

EXHIBIT G

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

INTERNATIONAL BUSINESS MACHINES COR-
PORATION,

Plaintiff,

v.

GROUPON, INC.

Defendant.

C.A. No. 16-122-LPS-CJB

JURY TRIAL DEMANDED

FINAL INVALIDITY CONTENTIONS OF DEFENDANT GROUPON, INC.

Pursuant to the Court’s October 3, 2016 Order (D.I. 17) and July 28, 2017 Order (D.I. 181.1), Defendant Groupon, Inc. (“Groupon”) makes the following disclosure of Final Invalidity Contentions to Plaintiff International Business Machines Corporation (“IBM”) regarding the currently asserted claims of United States Patent Nos. 5,796,967 (the “’967 patent”), 7,072,849 (the “’849 patent”), 5,961,601 (the “’601 patent”), and 7,631,346 (the “’346 patent”), collectively referred hereto as the “patents-in-suit.” In its August 25, 2017 Final Infringement Contentions (“Infringement Contentions”), IBM asserts claims 1-7, 12, and 17 of the ’967 patent, claims 1-9, 12-22, and 25 of the ’849 patent, claims 1-12 and 51-59 of the ’601 patent, and claims 1-3, 5, 8, 10, 12, and 13 of the ’346 patent¹ (collectively, the “Asserted Claims”).

¹ Claims 1, 3, 12, 14, 15, and 18 of the ’346 patent were recently held unpatentable as anticipated by Japanese Publ’n No. Tokkai 2004-302907A (“Sunada”) by the U.S. Patent and Trademark Office (“PTO”) on August 7, 2017. *See* IPR2016-00608, Paper No. 67. In a separate decision, the PTO also held that claims 1, 3, 12, 13, 15, and 18 of the ’346 patent are unpatentable as

This final disclosure is based on the Court's August 3, 2017 Order of Claim Construction (D.I. 121), the parties' agreed constructions set forth in the Supplemental Joint Claim Construction Chart (D.I. 64), Groupon's present understanding of the un-construed terms of the Asserted Claims, and Groupon's present understanding of IBM's interpretation of the claims of the patents-in-suit as advanced by IBM in its Infringement Contentions. Other than the Court's constructions, nothing in Groupon's disclosures should be regarded as necessarily reflecting the proper interpretation of the claims or an interpretation of the claims Groupon agrees with or proposes. Groupon disputes IBM's apparent claim interpretations to the extent they are inconsistent with the Court's or the parties' agreed claim constructions.

Groupon reserves the right to amend and supplement these disclosures consistent with the Court's Scheduling Order (D.I. 17) or otherwise as the Court may allow. For example, Groupon reserves the right to amend these Final Invalidity Contentions should IBM produce additional information, provide any information that it failed to provide in its Infringement Contentions, or should IBM amend its Infringement Contentions in any way.

Further, Groupon may amend or supplement this disclosure because IBM's infringement disclosures are deficient in numerous respects. For example, IBM has failed to specifically identify where each element of each Asserted Claim is found within each accused instrumentality. IBM has failed to identify the type of conduct alleged to infringe or the persons or entities that allegedly engage in such conduct. IBM has also failed to identify specifically whether each

anticipated by U.S. Patent No. 7,680,819 ("Mellmer"). *See* IPR2016-00609, Paper No. 42. Accordingly, claims 1, 3, 12, and 13 asserted against Groupon in this action are invalid. However, Groupon provides additional analysis regarding these invalid claims herein as IBM has not withdrawn assertion of these claims in this action.

limitation is purportedly literally present or present under the doctrine of equivalents in each accused instrumentality. Because curing such deficiencies may lead to further grounds for invalidity and non-infringement, Groupon specifically reserves the right to modify, amend, or supplement this disclosure should IBM amend or supplement its Infringement Contentions.

Groupon may also amend this disclosure in response to any positions taken by IBM during the course of the litigation, including without limitation any additional claim construction positions IBM takes or any contention by IBM that the prior art references described herein fail to render the Asserted Claims anticipated or obvious. Groupon reserves the right to amend these Final Invalidity Contentions to rely upon inventor and party admissions concerning the scope of the Asserted Claims and the teachings of the prior art and in response to any additional claim construction order from the Court.

I. FINAL INVALIDITY CONTENTIONS

Groupon's prior art reference charts (attached hereto as Exhibits A1-A30, B1-B27, C1-C28 and D1-25) identify where specifically in each item of prior art each element of each asserted claim is found, citing particular teachings/disclosure of the referenced art as applied to features of the patents-in-suit. While each element of each asserted claim is found in each item of prior art in multiple locations, the attached charts provide examples of citations sufficient to identify at least one such location where each claim limitation is found in each item of prior art. The citations are exemplary and not exclusive, and Groupon reserves the right to rely on uncited portions of the prior art references and on other publications and expert testimony as aids in understanding and interpreting the cited portions, as providing context to them, and as additional evidence that the prior art discloses a claimed feature. Indeed, persons of skill in the art generally would understand an item of prior art in the context of other publications, literature, products, and understanding. Thus, Groupon reserves the right to establish what was known to a person having ordinary skill in

the art through other publications, products, and/or testimony. Further, Groupon reserves the right to modify, amend, and/or change its interpretation of the prior art as additional or new constructions of the claim limitations may be provided by the Court, based on additional analysis by Groupon's technical expert witnesses, or based on other circumstances that may affect the interpretation or application of the claims.

The following lists provide the identity of each item of prior art patent, publication, or system that anticipates one or more of the asserted claims of the patents-in-suit or renders one or more of the asserted claims of the patents-in-suit obvious.

U.S. Patent No. 5,796,967

Exhibit	Short Name
A01	Tornetta
A02	Hernandez
A03	CompuServe Navigator
A04	Designing Xerox
A05	Xerox Star
A06	HyperCard
A07	Yourick
A08	Teitelman
A09	Salomon
A10	Satyanarayanan
A11	Henderson
A12	Hedges
A13	CLAM
A14	Caplinger
A15	Agarwal
A16	CIM
A17	Alber
A18	Arlen

A19	Interactive Architecture
A20	Power of NAPLPS
A21	Gecsei
A22	Morris
A23	Smith
A24	Talarzyk
A25	Akscyn
A26	Halasz
A27	Irven
A28	Trintex
A29	Rose
A30	Terry

Groupon further contends that to the extent the Asserted Claims are not anticipated by the above-identified references, the asserted claims the '967 patent are invalid as rendered obvious by at least the following combinations:

- Morris (A22) in view of Xerox Star (A05);
- Morris (A22) in view of Xerox Star (A05) and Salomon (A09);
- Morris (A22) in view of Xerox Star (A05) and Satyanarayanan (A10);
- Trintex System, as described in the publications and documents describing Trintex (A28);
- Apple HyperCard System, as described in the publications and documents describing HyperCard (A06) and in Rose (A29);
- HyperCard (A06) in view of Rose (A29) and Terry (A30);
- The Information Technology Center System ("ITC"), as described in Satyanarayanan (A10), in view of Xerox Star (A05);
- Xerox Star (A05) in view of Terry (A30);

- Xerox Star (A05) in view of Salomon (A09), Terry (A30), and Talarzyk (A24);
- Caplinger (A14) in view of Gecsei (A21);
- Teitelman (A08) in view of Morris (A22), Salomon (A09), and Talarzyk (A24);
- Interactive Architecture (A19) in view of Terry (A30); and
- Arlen (A18) in view of Interactive Architecture (A19) and Terry (A30).

U.S. Patent No. 7,072,849

Exhibit	Short Name
B01	Alber
B02	Bado
B03	Caplinger
B04	CompuServe Navigator
B05	Freeman '279
B06	Humble
B07	Malec
B08	Salomon
B09	Simon
B10	Talarzyk
B11	Telesophy 1985
B12	Telesophy 1987
B13	Trintex System
B14	Yourick
B15	Beyond Videotex
B16	Interactive Architecture
B17	Power of NAPLPS
B18	TextUp
B19	Nisenholtz
B20	CompuServe Information Manager
B21	Gecsei

B22	ITC Project
B23	Akscyn
B24	Halasz
B25	Irven
B26	Morris
B27	Wilson

Groupon further contends that to the extent the Asserted Claims are not anticipated by the above-identified references, the asserted claims the '849 patent are invalid as rendered obvious by at least the following combinations:

- Trintex System, as described in the publications and documents describing Trintex (B13);
- Trintex (B13) in view of Simon (B09);
- Trintex (B13) in view of Alber (B01);
- Trintex (B13) in view of Simon (B09) and Alber (B01);
- Trintex (B13) in view of Simon (B09) and Wilson (B27);
- Trintex (B13) in view of Simon (B09), Alber (B01), and Wilson (B27);
- Salomon (B08) in view of Alber (B01);
- Talarzyk (B10) in view of Caplinger (B03);
- The ITC Project System, as described in Satyanarayanan and Morris (B22), in view of Salomon (B08);
- Power of NAPLPS (B17) in view of Talarzyk (B10);
- Power of NAPLPS (B17) in view of Alber (B01);
- Interactive Architecture (B16) in view of Alber (B01); and
- Interactive Architecture (B16) in view of Alber (B01) and Caplinger (B03);

U.S. Patent No. 5,961,601

Exhibit	Short Name
C01	Danish
C02	Diener
C03	DuFresne
C04	Farquhar
C05	Graber
C06	Ibrahim
C07	Levergood
C08	Levine
C09	Lewine
C10	Minor
C11	Payne
C12	Perrochon
C13	Popp
C14	Da Silva
C15	Tobin
C16	OCLC Gateway
C17	WebStar
C18	Unleashed
C19	Admitted Prior Art
C20	Yoshida
C21	Yan
C22	Chiu '022
C23	Lewine '565
C24	WWW-Talk
C25	Freeman-Benson
C26	Spinning the Web
C27	Amazon 1995 Website
C28	Williams

Groupon further contends that to the extent the Asserted Claims are not anticipated by the above-identified references, the asserted claims the '601 patent are invalid as rendered obvious by at least the following combinations:

- Unleashed (C18);
- Unleashed (C18) in view of Danish (C01);
- Unleashed (C18) in view of Williams (C28);
- Graber (C05) in view of Danish (C01);
- Graber (C05) in view of Chiu '022 (C22);
- Graber (C05) in view of Admitted Prior Art (C19);
- Graber (C05) in view of Williams (C28);
- Graber (C05) in view of Ibrahim (C06);
- WebStar (C17) in view of Admitted Prior Art (C19);
- WebStar (C17) in view of Danish (C01);
- WebStar (C17) in view of Williams (C28);
- Online Computer Library Center Electronic Journals Online WWW Gateway System (“OCLC Gateway”), as described in the publications and documents describing OCLC Gateway (C16);
- Spinning the Web (C26);
- Spinning the Web (C26) in view of Williams (C28) or Unleashed (C18) and Danish (C01); and
- The Amazon 1995 Website (C27) in view of in view of Williams (C28), or Unleashed (C18) and Danish (C01)

U.S. Patent No. 7,631,346

Exhibit	Short Name
D01	FIM
D02	Bladow
D03	Chawla '492
D04	Chawla '696
D05	Doshi
D06	Dutcher
D07	Grandcolas
D08	Harris
D09	Kelly
D10	Levergood
D11	Mellmer
D12	Moreh
D13	Purpura
D14	Sunada
D15	Ting
D16	Weissman
D17	Yared
D18	Erdos
D19	DigitalMe
D20	Pfitzmann
D21	Admitted Prior Art
D22	Demchenko

D23	Kirschner
D24	Sullivan
D25	Liberty Alliance

Groupon further contends that to the extent the Asserted Claims are not anticipated by the above-identified references, the asserted claims the '346 patent are invalid as rendered obvious by at least the following combinations:

- Sunada (D14);
- Mellmer (D11);
- Liberty Alliance (D25);
- Sunada (D14) in view of Pfitzmann (D20);
- Mellmer (D11) in view of Pfitzmann (D20);
- DigitalMe (D19) in view of Pfitzmann (D20);
- Grandcolas (D07) in view of Admitted Prior Art (D21);
- Grandcolas (D07) in view of Pfitzmann (D20);
- Yared (D17) in view of Pfitzmann (D20);
- Liberty Alliance Specifications (D25);
- Liberty Alliance Specifications (D25) in view of Harris (D08);
- Liberty Alliance Specifications (D25) in view of Grandcolas (D07);
- Liberty Alliance Specifications (D25) in view of Grandcolas (D07) and Harris (D08);
- Liberty Alliance Specifications (D25) in view of Sunada (D14); and
- Liberty Alliance Specifications (D25) in view of Sunada (D14) and Harris (D08).

A. General State of the Art and Motivation to Combine

The following list identifies prior art references that establish the general state of the art at the time of each of the patents-in-suit. This list is not exhaustive and Groupon may supplement and amend this list as its investigation continues and the case progresses. Groupon may also supplement and amend this list based on any information it gleans from expert or other witness testimony in either this case or the *Priceline* case.

U.S. Patent No. 5,796,967**Prior Art Patents and Patent Applications**

Patent Number	Country of Origin	Date of Issue/ Publication
US 4,870,576 (“Tornetta”)	US	Sept. 26, 1980 (March 19, 1986)
US 4,962,475 (“Hernandez”)	US	Oct. 9, 1990 (Dec. 26, 1984)
US 4,775,935 (“Yourick”)	US	Sept. 22, 1986 (Oct. 4, 1988)
US 5,072,412 (“Henderson”)	US	March 25, 1987 (Dec. 10, 1991)
US 4,339,798 (“Hedges”)	US	Dec. 17, 1979 (July 13, 1982)
US 4,688,167 (“Agarwal”)	US	Sept. 27, 1984 (August 18, 1987)
US 4,649,380 (“Penna”)	US	Mar. 10, 1987 (June 11, 1984)
US 4,807,142 (“Agarwal ’142”)	US	Feb. 21, 1989 (Oct. 9, 1984)
US 4,989,141 (“Lyons”)	US	Jan. 29, 1991 (June 1, 1987)
US 5,157,717 (“Hitchcock”)	US	Oct. 20, 1992 (Feb. 20, 1991)
US 5,202,828 (“Vertelney”)	US	Apr. 13, 1993 (May 15, 1991)
US 5,367,624 (“Cooper”)	US	Nov. 22, 1994 (June 11, 1993)
US 5,375,200 (“Dugan”)	US	Dec. 20, 1994 (Nov. 13, 1992)
US 5,392,400 (“Berkowitz”)	US	Feb. 21, 1995 (July 2, 1992)

Patent Number	Country of Origin	Date of Issue/ Publication
US 5,432,901 (“Harper”)	US	July 11, 1995 (Jan. 30, 1992)
US 5,434,963 (“Kuwamoto”)	US	July 18, 1995 (Dec. 8, 1992)
US 5,463,726 (“Price”)	US	Oct. 31, 1995 (Sept. 6, 1994)
US,4,689,478 (“Hale”)	US	Aug. 25, 1987 (Dec. 24, 1984)

Prior Art Publications

Title	Date of Publication	Author/Publisher (short cite)
CompuServe Navigator User’s Guide	January 1988	CompuServe (“CompuServe Navigator”)
“Designing the Star User Interface”	April 1982	Dr. David Smith et al. / Byte Magazine, Volume 7, Issue 4 (“Byte Magazine”)
Apple Macintosh HyperCard User’s Guide	1987	Apple (“User’s Guide”)
The Complete HyperCard Handbook	1987	Danny Goodman (“Goodman”)
The Complete HyperCard Handbook by Danny Goodman, Expanded 2nd Edition	1988	Danny Goodman (“Handbook”)
HyperCard Developer’s Guide	1988	Danny Goodman (“Developer’s Guide”)
“The star user interface: an overview”	1982	David Canfield Smith et al. / Proceedings of the National Computer Conference (1982) (“NCC Proceedings”) (“Smith”)
“The Xerox Star: A Retrospective”	September 1989	Jeff Johnson et al. / IEEE Computer, Volume 22, Issue 9 (“Johnson”)
“A Tour Through Cedar”	1985	W. Teitelman / IEEE Transactions on Software Eng’g
“Design and Implementation of An Electronic Special Interest Magazine”	September 1986	Salomon / UCLA Thesis (“Salomon”)

Title	Date of Publication	Author/Publisher (short cite)
“The ITC Project: An Experiment in Large-Scale Distributed Personal Computing”	October 1984	M. Satyanarayanan (“Satyanarayanan”)
“CLAM – an Open System for Graphical User Interfaces”	1987	Lisa A. Call et al. (“CLAM”)
“An Information System Based on Distributed Objects”	October 4-8, 1987	Michael Caplinger, (“Caplinger”)
“HyperCard Made Easy”	1988	William B. Sanders / Scott, Foresman and Company (“HyperCard Made Easy”)
Videotex / Teletext: Principles & Practices	1985	Antone F. Alber, McGraw-Hill, Inc. (“Alber”)
“Trintex: Exclusive Status Report”	November 1986	Gary Arlen, Videotex Teletext News, No. 94 (“Arlen”)
“Interactive Architecture And The Role Of The Designer”	1984	John Vaughan, Videotex Proceedings 1984 (“Interactive Architecture”)
“The Power of NAPLPS: Beyond Videotex”	1985	John Vaughan, Videotex International Proceedings 1985 (“Power of NAPLPS”)
The Architecture of Videotex Systems	1983	Jan Gecsei, Prentice-Hall, Inc. (“Gecsei”)
“Caching Hints in Distributed Systems”	January 1987	Douglas B. Terry (“Terry”)
“Hypermedia: finally here”	November 1987	Tekla S. Perry, IEEE Spectrum (“Perry”)
“Custom Communications from the Consumer Databanks”	September 1987	Mick O’Leary (“O’Leary”)
“Multi-Media Information Services: A Laboratory Study”	June 1988	Judith H. Irvén et al. (“Irvén”)
“Andrew: A Distributed Personal Computing Environment”	March 1986	James H. Morris et al. (“Morris”)
“Menlo Corporation's Pro-Search: Review of a Software Search Aid”	1986	Barbara Quint (“Quint”)
“Foreshadowing Electronic Publishing Age: First Exposures to Viewtron”	December 1985	Tony Atwater et al. (“Atwater”)
“Defining Constraints Graphically”	April 1986	Alan Borning (“Borning”)

Title	Date of Publication	Author/Publisher (short cite)
“DVI - A Digital Multimedia Technology”	July 1989	David G. Ripley (“Ripley”)
“The Trillium User Design Environment”	April 1986	D. Austin, Jr. Henderson (“Trillium User”)
“The Consul/CUE Interface: An Integrated Interactive Environment”	December 1983	Kaczmarek, T. et al. (“Kaczmarek”)
“The Computer Sciences Electronic Magazine: Translating from Paper to Multimedia”	May 3, 1992	W. Randall Koons et al. (“Koons”)
“KMS: A Distributed Hypermedia System for Managing Knowledge In Organizations”	November 1987	Robert Akscyn, et al. (“Akscyn”)
“A Comparison Application Sharing Mechanisms Real-Time Desktop Conferencing Systems”	1990	S. R. Ahuja et al. (“Ahuja”)
“Reflections on Notecards: Seven Issues for the Next Generation of Hypermedia Systems”	July 1988	Frank G. Halasz (“Halasz”)
“A Tour Through Cedar”	1985	Warren Teitelman (“Teitelman”)
“An Input-Output Model for Interactive Systems”	April 1986	Mary Shaw (“Shaw”)
“Officeaid: An Integrated Document Management System”	1984	Allison Lee et al. (“Officeaid”)
“The Visi On Operating Environment”	September 1983	William T. Coleman III et al. (“Coleman”)
“An Experimental Multi-Media Bridging System”	1988	E.J. Addeo et al. (“Addeo”)
“A Multiple, Virtual-Workspace Interface Support User Task Switching”	1987	Stuart K. Card et al. (“Card”)
“gIBIS: A Hypertext Tool for Team Design Deliberation”	November 1987	Conklin, Jeff et al. (“Conklin”)
“A Control Panel Interface for Graphics and Image Processing Applications”	1987	Gene I. Fisher et al. (“Fisher”)
“HDM: A Model for the Design of Hypertext Applications”	December 1991	Franca Garzotto, et al. (“Garzotto”)

Title	Date of Publication	Author/Publisher (short cite)
“Enhancing the Usability of an Office Information System Through Direct Manipulation”	December 1983	Allison Lee et al. (“Office Information System”)
“Domain Delphi: Retrieving Documents Online”	April 1986	Penny Orwick (“Orwick”)
“Teletext and Videotex in the United States: Market Potential Technology Public Policy Issues”	1982	John Tydeman et al. (“Tydeman”)
“New Package Rates”	July 7, 1987	Peter Helmer (“IBM-GROUPON10120808”)
“Notes from Product Descriptor Meeting”	March 11, 1987	Trintex (“IBM-GROUPON10100828”)
“Provider Agreements [Entered] ”	July 20, 1987	Thomas Witt (“IBM-GROUPON10102751”)
“Reception System Technical Review”	June 1986	Trintex (“IBM-GROUPON10102910”)
“Trintex Announces First Advertisers”	May 22, 1987	Trintex (“IBM-GROUPON10100493”)
“Client Dates”	January 16, 1987	Susan Pechman (“IBM-GROUPON10120750”)
“Coldwell Banker Invitation”	March 31, 1987	Bruce E. Bellmare (“IBM-GROUPON10102967”)
“Component Level Advertising Descriptor”	January 17, 1986	Steven J. Schimmed (“IBM-GROUPON10103874”)
“Dollar Bank, High Level Design”	May 5, 1987	Trintex (“IBM-GROUPON10121898”)
“Dreyfus Invitation”	May 13, 1987	Bruce E. Bellmare (“IBM-GROUPON10103255”)
“Trintex Product Descriptor”	February 23, 1987	Henry Heilbrunn (“IBM-GROUPON10100766”)
“Contract Procedures”	February 27, 1987	Peter Helmer (“IBM-GROUPON10100914”)
“Allstate Testing Letter”	May 8, 1987	Glenn Shapiro (“IBM-GROUPON10100910”)
“Signed Provider Agreements”	July 8, 1987	Bruce W. Thurlby (“IBM-GROUPON10102738”)
“System Architecture Overview”	February 24, 1986	A.M. Wolf (“IBM-GROUPON10120217”)

Title	Date of Publication	Author/Publisher (short cite)
“Visions Document”	April 10, 1987	Henry Heilbrunn (“IBM-GROUPON10120654”)
“Viewtron: How to Use”	1983	AT&T (“Viewtron Video”)
The New Electronic Media “Vid-eotex”	1987	W. Wayne Talarzyk, Lexington Books (“Talarzyk”)

Prior Art Systems/Services

Item/Service
CompuServe (“CompuServe Navigator”)
CompuServe Information Manager (“CIM”)
Xerox Star Information System (“Xerox Star”)
Apple HyperCard
Trintex/Prodigy
Viewtron

U.S. Patent No. 7,072,849

Prior Art Patents and Patent Applications

Patent Number	Country of Origin	Date of Issue/ Publication
US 4,703,423 (“Bado”)	US	Oct. 27, 1987 (July 10, 1984)
US 4,602,279 (“Freeman ’279”)	US	July 22, 1986 (Nov. 29, 1983)
US 4,833,308 (“Humble”)	US	May 23, 1989 (July 24, 1986)
US 4,973,952 (“Malec”)	US	Nov. 27, 1990 (Sept. 21, 1987)
US 4,575,579 (“Simon”)	US	Mar. 11, 1986 (Dec. 17, 1979)
US 4,775,935 (“Yourick”)	US	Oct. 4, 1988 (Sept. 22, 1986)
EP 0,403,232A2 (“Parillo”)	US	Dec. 10, 1990 (June 12, 1990)
US 4,751,578 (“Reiter”)	US	June 14, 1988

Patent Number	Country of Origin	Date of Issue/ Publication
		(May 28, 1985)
US 5,042,809 (“Richardson”)	US	Aug. 27, 1991 (Nov. 20, 1990)
US 5,220,501 (“Lawlor”)	US	June 15, 1993 (Dec. 8, 1989)
US 5,305,195 (“Murphy”)	US	Apr. 19, 1994 (Mar. 25, 1992)
US 5,410,326 (“Goldstein”)	US	Apr. 25, 1995 (Dec. 4, 1992)
US 6,418,556 (“Bennington”)	US	July 9, 2002 (Sept. 9, 1993)
US 3,991,495 (“Wilson”)	US	Nov. 16, 1976 (Dec. 4, 1974)

Prior Art Publications

Title	Date of Publication	Author/Publisher (short cite)
Videotex / Teletext: Principles & Practices	1985	Antone F. Alber, McGraw-Hill, Inc. (“Alber”)
“An Information System Based on Distributed Objects”	October 4, 1987	Michael Caplinger, Bell Communications Research (“Caplinger”)
CompuServe Navigator User’s Guide	January 1988	CompuServe (“CompuServe Navigator”)
“Design and Implementation of An Electronic Special Interest Magazine”	August 29, 1986	Gitta B. Salomon, Massachusetts Institute of Technology (“Salomon”)
The New Electronic Media “Videotex”	1987	W. Wayne Talarzyk, Lexington Books (“Talarzyk”)
“Telesophy”	August 1985	Bruce R. Schatz (“Telesophy 1985”)
“Telesophy: A System for Manipulating the Knowledge of A Community”	May 1987	Bruce R. Schatz (“Telesophy 1987”)
“IBM, Sears shooting for ’88 entry; New life for videotex”	April 6, 1987	Cleveland Horton, Advertising Age (“Trintex 1”)
“Trintex Signs up 42 Advertising	June 1, 1987	Jerrold Ballinger, DM

Title	Date of Publication	Author/Publisher (short cite)
Clients; Is Hoping for Launch in Early '88, VP Says,"		News ("Trintex 2")
"Big advertisers link to videotext venture"	June 15, 1987	Cleveland Horton, Advertising Age ("Trintex 3")
"Trintex interactive videotext service will feature magazine-type format"	June 22, 1987	Arthur Markowitz, Discount Store News ("Trintex 4")
"Trintex to Aim On-Line Ads At Demographic Segments"	June 30, 1987	The American Banker ("Trintex 5")
"Inside Trintex; Technology & Operations supplement"	September 8, 1987	Women's Wear Daily ("Trintex 6")
"Trintex: Videotex Gets Personalized"	October 12, 1987	David Kiley, AdWeek ("Trintex 7")
"Trintex: Exclusive Status Report"	November 1986	Gary Arlen, Videotex Teletext News, No. 94 ("Trintex 8")
"NAPLPS: Beyond Videotex"	1985	John Vaughan ("Beyond Videotex")
"Interactive Architecture And The Role Of The Designer"	1984	John Vaughan, Videotex Proceedings 1984 ("Interactive Architecture")
"The Power of NAPLPS: Beyond Videotex"	1985	John Vaughan, Videotex International Proceedings 1985 ("Power of NAPLPS")
"The Communication Studio"	1985	Textup Documentation by John Vaughan ("TextUp")
"The Architecture of Videotex Systems"	1983	Jan Gecsei, Prentice-Hall Inc. ("Gecsei")
"Custom Communications from the Consumer Databanks"	September 1987	Mick O'Leary ("O'Leary")
"Multi-Media Information Services: A Laboratory Study"	June 1988	Judith H. Irvén et al. ("Irvén")
"Andrew: A Distributed Personal Computing Environment"	March 1986	James H. Morris et al. ("Morris")
"Menlo Corporation's Pro-Search: Review of a Software Search Aid"	January 1986	Barbara Quint ("Quint")

Title	Date of Publication	Author/Publisher (short cite)
“Foreshadowing Electronic Publishing Age: First Exposures to Viewtron”	December 1985	Tony Atwater et al. (“Atwater”)
“Defining Constraints Graphically”	April 1986	Alan Borning (“Born-ing”)
“DVI - A Digital Multimedia Technology”	July 1989	David G. Ripley (“Ripley”)
“The Trillium User Design Environment”	April 11986	D. Austin, Jr. Henderson (“Trillium User”)
“The Consul/CUE Interface: An Integrated Interactive Environment”	December 1983	Kaczmarek, T. et al. (“Kaczmarek”)
“The Computer Sciences Electronic Magazine: Translating from Paper to Multimedia”	May 3, 1992	W. Randall Koons et al. (“Koons”)
“KMS: A Distributed Hypermedia System for Managing Knowledge In Organizations”	November 1987	Robert Akscyn, et al. (“Akscyn”)
“A Comparison Application Sharing Mechanisms Real-Time Desktop Conferencing Systems”	January 1990	S. R. Ahuja et al. (“Ahuja”)
“Reflections on Notecards: Seven Issues for the Next Generation of Hypermedia Systems”	July 1988	Frank G. Halasz (“Halasz”)
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“An Input-Output Model for Interactive Systems”	April 1986	Mary Shaw (“Shaw”)
“Officeaid: An Integrated Document Management System”	January 1984	Allison Lee et al. (“Officeaid”)
“The Visi On Operating Environment”	September 1983	William T. Coleman III et al. (“Coleman”)
“An Experimental Multi-Media Bridging System”	1988	E.J. Addeo et al. (“Addeo”)
“A Multiple, Virtual-Workspace Interface Support User Task Switching”	1987	Stuart K. Card et al. (“Card”)
“gIBIS: A Hypertext Tool for Team Design Deliberation”	November 1987	Conklin, Jeff et al. (“Conklin”)

Title	Date of Publication	Author/Publisher (short cite)
“A Control Panel Interface for Graphics and Image Processing Applications”	1987	Gene I. Fisher et al. (“Fisher”)
“HDM: A Model for the Design of Hypertext Applications”	December 1991	Franca Garzotto et al. (“Garzotto”)
“Enhancing the Usability of an Office Information System Through Direct Manipulation”	December 1983	Allison Lee et al. (“Office Information System”)
“Domain Delphi: Retrieving Documents Online”	April 1986	Penny Orwick (“Orwick”)
“Teletext and Videotex in the United States: Market Potential Technology Public Policy Issues”	1982	John Tydeman et al. (“Tydeman”)
“New Package Rates”	July 7, 1987	Peter Helmer (“IBM-GROUPON10120808”)
“Notes from Product Descriptor Meeting”	March 11, 1987	Trintex (“IBM-GROUPON10100828”)
“Provider Agreements [Entered] ”	July 20, 1987	Thomas Witt (“IBM-GROUPON10102751”)
“Reception System Technical Review”	June 1986	Trintex (“IBM-GROUPON10102910”)
“Trintex Announces First Advertisers”	May 22, 1987	Trintex (“IBM-GROUPON10100493”)
“Client Dates”	January 16, 1987	Susan Pechman (“IBM-GROUPON10120750”)
“Coldwell Banker Invitation”	March 31, 1987	Bruce E. Bellmare (“IBM-GROUPON10102967”)
“Component Level Advertising Descriptor”	January 17, 1986	Steven J. Schimmed (“IBM-GROUPON10103874”)
“Dollar Bank, High Level Design”	May 5, 1987	Trintex (“IBM-GROUPON10121898”)
“Dreyfus Invitation”	May 13, 1987	Bruce E. Bellmare (“IBM-GROUPON10103255”)
“Trintex Product Descriptor”	February 23, 1987	Henry Heilbrunn (“IBM-GROUPON10100766”)
“Contract Procedures”	February 27, 1987	Peter Helmer (“IBM-GROUPON10100914”)

Title	Date of Publication	Author/Publisher (short cite)
“Allstate Testing Letter”	May 8, 1987	Glenn Shapiro (“IBM-GROUPON10100910”)
“Signed Provider Agreements”	July 8, 1987	Bruce W. Thurlby (“IBM-GROUPON10102738”)
“System Architecture Overview”	February 24, 1986	A.M. Wolf (“IBM-GROUPON10120217”)
“Visions Document”	April 10, 1987	Henry Heilbrunn (“IBM-GROUPON10120654”)
“Viewtron: How to Use”	1983	AT&T (“Viewtron Video”)
“Advertising on Videotex: What We’ve Learned”	1984	Martin Nisenholtz (“Nisenholtz”)
“The ITC Project: An Experiment in Large-Scale Distributed Personal Computing”	1984	M. Satyanarayanan (“ITC Project”)

Prior Art Systems/Services

Item/Service
CompuServe Navigator
CompuServe Information Manager
TextUp
Telesophy
Trintex/Prodigy

U.S. Patent No. 5,961,601

Prior Art Patents and Patent Applications

Patent Number	Country of Origin	Date of Issue/Publication
US 6,275,821 (Danish)	US	Aug. 14, 2001 (Oct. 14, 1994)
US 5,784,562 (Diener)	US	Jul. 21, 1998 (Oct. 10, 1995)
US 6,835,712 (DuFresne)	US	Nov. 10, 1998 (May 3, 1996)
US 5,717,860 (Graber ’860)	US	Feb. 10, 1998

Patent Number	Country of Origin	Date of Issue/Publication
		(Sep. 20, 1995)
U.S. 5,708,780 (Levergood)	US	Jan. 13, 1998 (June 7, 1995)
US 5,745,681 (Levine)	US	Apr. 28, 1998 (Jan. 11, 1996)
US 6,230,202 (Lewine '202)	US	May 8, 2001 (May 1, 1995)
US 5,740,252 (Minor)	US	Apr. 14, 1998 (Oct. 13, 1995)
US 5,715,314 (Payne)	US	Feb. 3, 1998 (Oct. 24, 1994)
US 6,249,291 (Popp)	US	June 19, 2001 (Sep. 22, 1995)
US 6,141,666 (Tobin)	US	Oct. 31, 2000 (Jan. 22, 1996)
U.S. 6,016,484 (Williams)	US	Jan. 18, 2000 (Apr. 26, 1996)
US 5,712,979 (Graber '979)	US	Jan. 27, 1998 (Sept. 20, 1995)
US 5,740,430 (Rosenberg)	US	Apr. 14, 1998 (Nov. 6, 1995)
US 5,752,022 (Chiu)	US	May 12, 1998 (Aug. 7, 1995)
US 5,768,581 (Cochran)	US	June 16, 1998 (May 7, 1996)
US 5,784,565 (Lewine '565)	US	July 21, 1998 (Feb. 5, 1997)
US 6,092,199A (Dutcher)	US	July 18, 2000 (July 7, 1997)

Prior Art Publications

Title	Date of Publication	Author/Publisher (short cite)
"Collaborative Ontology Construction for Information Integration"	1995	Adam Farquhar, Richard Fikes ("Farquhar")
"World-wide algorithm animation"	1994	Bertrand Ibrahim, Computer Networks and ISDN Systems, 27, (1994), pp. 255-265. ("Ibrahim")

Title	Date of Publication	Author/Publisher (short cite)
“Translation Servers: Gateways Between Stateless and Stateful Information Systems”	1994	Louis Perrochon, Network Services Conference. 1994 (“Perrochon”)
“Organizational Management System in an Heterogeneous Environment – A WWW Case Study”	January 31, 1995	Alberto Rodrigues Da Silva, Jose Borbinha, The International Federation for Information Processing (“Da Silva”)
“The World Wide Web and Emerging Internet Resource Discovery Standards for Scholarly Literature”	Spring 1995	Stuart Weibel, Library Trends, Vol. 43, No. 4 (“Weibel Library Trends”)
“An architecture for Scholarly Publishing on the World Wide Web”	1995	Stuart Weibel et al., Computer Networks and ISDN Systems 28 (“Weibel Architecture”)
“Web*-A Technology to Make Information Available on the Web”	April 1995	Almasi et. al, Proceedings of the Fourth Workshop on Enabling Technologies: Infrastructure for Collaborative Enterprises (“Almasi”)
“DynaWeb: Interfacing large SGML repositories and the WWW”	December 12, 1995	Gavin Thomas Nicol (“Nicol”)
“The Age of the Customized Web Site”	December 1996	Hayato Yoshida (“Yoshida”)
“Techniques for Server-Side Dynamic Generation”	September 1994	Thomas Boutell et al. (“Boutell”)
“The Zweb W3 Gateway”	July 1995	Eric P. Kasten et al. (“Kasten”)
“Using the Web to Provide Private Information -or- Password Protection Without Modifying Clients”	May 1994	Bjorn N. Freeman-Benson (“Freeman-Benson”)
“Interactive Information Services Using World-Wide Web Hypertext”	April 20, 1994	Steve Putz (“Putz”)
“WWW Talk Mailing List”	January 1995	Robert S. Thau et al. (“WWW-Talk”)
“From User Access Patterns to Dynamic Hypertext Linking”	February 5, 1996	Tak Woon Yan et al. (“Yan”)

Title	Date of Publication	Author/Publisher (short cite)
HTML and CGI Unleashed	1995	John December et al., Sams.net publishing (“Unleashed”)
HTML and CGI Unleashed (Contents of CD)	1995	John December et al., Sams.net publishing (“Unleashed CD”)
“Spinning the Web: A Guide to Serving Information on the World Wide Web”	February 1996	Yuval Fisher (“Spinning the Web”)

Prior Art Systems/Services

Item/Service
Online Computer Library Center (OCLC) Electronic Journals Online WWW Gateway (“OCLC Gateway”)
West Virginia University Concurrent Engineering Research Center WebStar System (“Webstar”)
Amazon.com Website available in 1995 (“Amazon 1995 Website”)

U.S. Patent No. 7,631,346

Prior Art Patents and Patent Applications

Patent Number	Country of Origin	Date of Issue/ Publication
US 6,115,040 (“Bladow”)	US	Sept. 5, 2000 Sept. 24, 1998)
US 7,877,492 (“Chawla ’492”)	US	Jan. 25, 2011 (Feb. 26, 2004)
US 6,826,696 (“Chawla ’696”)	US	Nov. 30, 2004 (July 26, 2000)
EP 1 089 516 (“Doshi”)	EPO	Apr. 4, 2001 (Sept. 20, 2000)
US 6,092,199 (“Dutcher”)	US	July 18, 2000 (July 7, 1997)
US 7,137,006 (“Grandcolas”)	US	Nov. 14, 2006 (Sept. 22, 2000)

Patent Number	Country of Origin	Date of Issue/ Publication
US 7,610,617 (“Kelly”)	US	Oct. 27, 2009 (Dec. 22, 2004)
US 5,708,780 (“Levergood”)	US	Jan. 13, 1998 (Jun. 7, 1995)
US 7,680,819 (“Mellmer”)	US	Mar. 16, 2010 (Sep. 27, 2000)
US 6,959,336 (“Moreh”)	US	Oct. 25, 2005 (April 7, 2001)
US 6,421,768 (“Purpura”)	US	July 16, 2002 (May 4, 1999)
2004-302907 (“Sunada”)	Japan	Oct. 28, 2004 (Mar. 31, 2003)
US 2004/0205176 (“Ting”)	US	Oct. 14, 2004 (Mar. 21, 2003)
US 2002/0156905 (“Weissman”)	US	Oct. 24, 2002 (Feb. 21, 2001)
US 2003/0149781 (“Yared”)	US	Aug. 7, 2003 (Dec. 3, 2002)
US 5,550,981A (“Bauer”)	US	Aug. 27, 1996 (June 21, 1994)
WO 02/13,114A1 (“Sullivan”)	US	Feb. 14, 2002 (July 27, 2001)

Prior Art Publications

Title	Date of Publication	Author/Publisher (short cite)
“Federated Identity Management: Managed Beta Program”	2003	IBM (“FIM”)
“Give Me Liberty . . . ”	June 1, 2003	Jeffrey Harris (“Harris”)
“Shibboleth-Architecture DRAFT v05”	May 2, 2002	Marlena Erdos (“Erdos”)
“Novell Debuts New digitalme ‘In- the-Net’ Service”	October 5, 1999	Novell, Inc. (“In the Net”)
“The Human Face of NDS”	August 1, 1999	Carrie Oakes (“Oakes”)
“Dynamic Creation and Management of Runtime Environments in the Grid”	September 6, 2003	Kate Keahey, et al. (“Dynamic Creation”)

Title	Date of Publication	Author/Publisher (short cite)
“From Sandbox to Playground”	November 8, 2004	Kate Keahey et al. (“Sandbox”)
“Virtual Organisations in Computer Grids and Identity Management”	January-March 2004	Demchenko, Yuri (“Demchenko”)
“Walden: A Scalable Solution for Grid Account Management”	November 8, 2004	B Kirschner et al. (“Kirschner”)
“The PRIMA Grid Authorization System”	March 18, 2005	Markus Lorch et al. (“PRIMA”)
“Privilege Management and Authorization in Grid Computing Environments”	April 16, 2004	Markus Lorch (“Privilege Management”)
“Access Control Based on Attribute Certificates for Medical Intranet Applications”	March 17, 2001	Ioannis Mavridis et al. (“Mavridis”)
“Ping Identity Corp. Document SID2-5”	July 21, 2004	Ping Identity Corp. (“Ping Identity”)
“An Online Credential Repository for the Grid: MyProxy”	August 7, 2001	Jeff Novotny et al. (“Novotny”)
“Liberty ID-FF Architecture Overview”	Undated	Thomas Wason et al eds. (“Liberty Alliance Specification”)
“Liberty ID-FF Bindings and 962 Profiles Specification, version 1.2-errata-v2.0”	September 12, 2004	Scott Cantor et al. eds. (“Bindings and Profiles”)
“Liberty ID-FF Protocols and Schema Specification, version 965 1.2-errata-v3.0”	December 14, 2004	Scott Cantor et al. eds. (“Protocols and Schema”)
“Liberty ID-FF Authentication Context Specification, version 1.3”	December 14, 2004	Paul Madsen ed. (“Madsen”)
“Liberty Metadata Description and Discovery Specification, version 1.1”	December 14, 2004	Peter Davis ed. (“Davis”)
“Liberty Technical Glossary, version 1.4”	December 14, 2004	Jeff Hodges ed. (“Hodges”)

Title	Date of Publication	Author/Publisher (short cite)
“Liberty ID-FF Implementation Guidelines, version 1.2”	April 18, 2004	Peter Thompson et al eds. (“Thompson”)
“Bindings and Profiles for the OASIS Security Assertion Markup Language (SAML), version 1.1, OASIS Standard”	September 2, 2003	Eve Maler et al. eds. (“Maler”)
“Uniform Resource Locators (URL), RFC 1738”	December 1994	T. Berners-Lee et al. (“RFC 1738”)
“Key words for use in RFCs to Indicate Requirement Levels, RFC 2119”	March 1997	S. Bradner (“RFC 2119”)
“HTTP State Management Mechanism, RFC 2965”	October 2000	D. Kristol et al. (“RFC 2965”)
“Hypertext Transfer Protocol – HTTP/1.1, RFC 2616”	June 1999	R. Fielding et al. (“RFC 2616”)
“Uniform Resource Identifiers (URI): Generic Syntax, RFC 2396”	August 1998	T. Berners-Lee et al. (“RFC 2396”)
“Simple Object Access Protocol (SOAP) 1.1”	May 8, 2000	Don Box et al. (“Box”)
HTML and CGI Unleashed	1995	John December et al., Sams.net publishing (“Unleashed”)
HTML and CGI Unleashed (Contents of CD)	1995	John December et al., Sams.net publishing (“Unleashed CD”)
“Privacy and Security Best Practices, version 2.0”	November 12, 2003	Christine Varney ed. (“Privacy and Security”)
“Privacy in Browser-Based Attribute Exchange”	November 21, 2002	Birgit Pfitzmann (“Pfitzmann”)

Prior Art Systems/Services

Item/Service
Novell DigitalMe (“DigitalMe”)

Each patent-in-suit simply arranges old elements known in the computer field, with each performing the same function it had been known to perform, and yields no more than what one would expect from such an arrangement—the combination is obvious. As apparently interpreted by IBM in its Infringement Contentions, the '967 patent applies generically to any user interface constructed from optionally cached data and the related '849 patent applies generically to any user interface constructed from optionally cached data where a portion of the user interface displays advertising. The above-identified prior art references use those familiar elements for their primary or well-known purposes in a manner well within the ordinary level of skill in the art. The '601 patent is directed to a well-understood solution to a well-known problem—maintaining state information in a stateless protocol, particularly HTTP, by embedding state information or information sufficient to identify state in hyperlinks for future requests to the server in communication with a browser. Both the problem and the specific solutions claimed by the '601 patent were well understood before its invention. The '346 patent is directed to well-known solutions to the problem of reducing user burdens by offering a single sign-on service to interact with various protected resources on a network. This was a well-developed technological field by the time of the invention of the '346 patent.

The above-identified prior art references address the same or similar technical issues and suggest the same or similar solutions to those issues as the patents-in-suit. Accordingly, common sense and the knowledge of the prior art, along with its disclosure, render the asserted claims of the patents-in-suit invalid under Section 102 and/or Section 103.

Indeed, methods for creating partitioned user interfaces with menu bars and/or advertising were well known in the art before the '967 patent, as was constructing user interface elements from defined data structures that could be cached and switching between applications. For example, the

CompuServe Navigator system was a prior art application that served as the user interface to the CompuServe Information Service. The Xerox Star user interface, well known as a groundbreaking advance in user interfaces—and prior art to the '967 patent—allowed users to switch between applications. Many of the claim limitations of the '967 patent claim basic concepts that were inherent in those and other technologies. The '849 patent adds little to this notion—merely reciting well-known limitations related to display and caching of advertising data, as well as identifying advertising targets by demographic or location. Indeed, much of this information is admitted as prior art. (See '849 patent at 2:20-30 (discussing the “conventional manner” of supplying advertising “from a host to a user site”), 10:23-27 (referencing “conventional marketing analysis techniques” for establishing “the user characterizations”)).

Methods for maintaining state information by embedding it in hyperlinks, as disclosed in the '601 patent, were also well known and used. For example, U.S. Patent 5,717,860 to Graber et al. discloses a method and apparatus for tracking the navigation path of a user that has been directed to a second site on the World Wide Web from a first site by maintaining navigation history in URLs. And the publication *HTML & CGI Unleashed* was a textbook that described, among other things, maintaining state information as part of the HTTP protocol. Among the many disclosed methods for maintaining state in this reference, one is through the use of state information embedded in URL data, including via use of a CGI query string. The reference also includes sample computer source code that performs the functions of the '601 patent, particularly as interpreted by IBM in its Final Infringement Contentions.

The single-sign-on functionality of the '346 patent was also well known and used before the purported invention. For example, U.S. Patent No. 7,680,819 to Mellmer describes a system for managing digital identity information and the use of an “Autologin service,” which “logs a user

in with the appropriate credentials when a user browses a web site that requests a username and password.” As a further example, Japanese Patent Application Publication No. 2004-302907 to Sunada discloses a system that can automatically generate user account information based on information at a single-sign-on server. IBM itself participated in an industry standards process for single sign-on functionality—the Liberty Alliance Project. Technical specifications published as part of that project describe the purportedly novel aspects of the ’346 patent. Further, federated computing environments were well known at the time of the ’346 patent and described, for example, in Doshi, Grandcolas, Harris, Moreh, Weissman, and Yared.

Creation of a user account as part of a single sign-on process was also obvious at the time of the ’346 patent. Not only were single sign-on solutions well known (*see e.g.*, Pfitzmann), but it was also well known that some services were available only to users with a user account (*see e.g.*, ’346 patent at 1:28-30). It was also well known that a user account could be created on the fly. For example, Sunada discloses that “[i]f there is no user account, it obtains information regarding the user from the SSO server 1, uses attribute association information in the attribution association database 24 to automatically generate user account information, and registers it in the user account information database 23.” A person of ordinary skill in the art would have found it obvious to add an on-the-fly account creation step to known single sign-on solutions because it would have been applying a known technique to a known method to yield predictable results. Indeed, adding on-the-fly account creation functionality to the well-known single sign-on systems would have predictably added the convenience of an automatically-created account without imposing additional steps or requirements on the user. Furthermore, users would have “expect[ed] that computer systems coordinate their actions so that burdens on the user are reduced.” (’346 patent at 1:25-27). Any creation of an account on the fly would predictably reduce the burden on

the user and permit the user to access certain resources that are only accessible to those with an account. Such automation of the account creation process is exactly the type of coordination between computer systems that users would have expected.

It would have also been obvious before the '346 patent to commence creation of a user account prior to retrieving user attribute information for the user as part of the single sign-on operation. For example, Sunada discloses “[i]n a case where S35 determines that the user account does not exist, S36 inquires of the SSO server 1 for remote attribute information in the attribute association information which is housed in an attribute association database 24, like the one shown in Figure 2 for instance, and obtains the information.” (Sunada at 31.) Similarly, Pfitzmann discloses multiple requests and responses for attributes, which would have yielded the predictable result of supplying additional information if it is determined that additional information is necessary. It would also have been obvious before the '346 patent to complete creation of the user account after retrieving user attribute information as part of the single sign-on operation. For example, Sunada discloses “[u]pon putting together information necessary for creating the user account in this manner, S39 creates the user account information and registers it with the user account information database 23. With this, in a case where the access state is that of being logged in, the user account information now exists.” (Sunada at 35.) Adding such a concluding user account creation operation would allow the account to be created on the fly, which in turn would provide the predictable result of increasing the convenience for the user.

In *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), the Supreme Court held that prior art need not disclose the precise teachings of a patented invention to render it obvious because a court “can take account of the inferences and creative steps that a person of ordinary skill in the

art would employ.” *Id.* at 418. The Supreme Court rejected the Federal Circuit’s prior rigid approach requiring “precise teachings directed to the specific subject matter of the challenged claim,” and held instead that the obviousness analysis requires consideration of “ordinary skill and common sense.” *Id.* at 418, 421. As the Court explained, “[i]t is common sense that familiar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* at 402. Under *KSR*, an explanation for why a combination of prior art items renders a claim obvious may be found in the “interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art” *Id.* at 418. The Supreme Court also rejected the view that the prior art references that are combined must address the same problem as the patented invention, stating that “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide reason for combining the elements” *Id.*

The references listed above, alone or in combination, contain an explicit and/or implicit teaching, suggestion, motivation, or inference to combine them due to the following: (1) the knowledge generally available to a person of ordinary skill in the art, (2) the prior art references as understood by a person of ordinary skill in the art, (3) the nature of the problem to be solved, (4) the fact that each prior art reference addresses similar problems, (5) the knowledge of those skilled in the art that the disclosed components had been or could be used to implement various features.

1. The ’967 Patent

The references related to the ’967 patent all deal with the same technological field: they are related to the construction of user interfaces in a multiple application environment in which the user interface is constructed from data objects that may be stored locally. The references also

address issues related to caching and switching between applications. *See, e.g., Caching Hints in Distributed Systems* by Douglas B. Terry; *An Information System Based on Distributed Objects* by Michael Caplinger (“Caplinger”); U.S. Patent No. 4,962,475 (“Hernandez”).

Many of the references for the ’967 patent and the related ’849 patent discussed below refer to one another or otherwise contain reasons that a person of ordinary skill in the art would combine them. For example, many of the references use similar language (i.e., “data objects,” “user interface”) to describe the construction and use of interfaces for applications. The references themselves discuss the benefits of applying their disclosures to existing prior art interactive computer systems, including networks, videotext, and so on. Because such similarities, *inter alia*, indicate that these references are all directed to the same or a similar technological field, a person of ordinary skill in the art would naturally be aware of and combine these similar and well-known teachings of the references.

Groupon provides the following non-exclusive examples of motivations to combine the various references identified herein.

Morris in view of Satyanarayanan (ITC System). Morris reports the work of the Information Technology Center (“ITC”), which was a collaborative effort between IBM and Carnegie-Mellon University (“CMU”), on the “Andrew” project, also referred to as the “ITC Project.” Satyanarayanan similarly describes the “collaborative effort between [IBM] and [CMU] in . . . designing and implementing . . . one of the largest distributed computing systems yet attempted.” Satyanarayanan at Abstract. Satyanarayanan thus provides further description of the ITC Project’s subject matter and public use. Accordingly, a person of ordinary skill in the art would be motivated to combine Morris’ and Satyanarayanan’s descriptions of the ITC System.

Morris (and ITC System) view of Xerox Star (and Smith). Morris provides explicit motivation to combine the user interface concepts of Xerox Star with the disclosure of Morris. For example, Morris states that the Window Manager of the Andrew user interface is “based partly on the Xerox Star [25],” where that reference “[25]” is a citation to “The star user interface: an overview” by David Canfield Smith (“Smith”) describing the Xerox Star system. Morris at 195, 201. Additionally, Morris states that “[t]he Xerox Alto System [11] has been a powerful inspiration for our system.” *Id.* at 184. Specifically, Morris identifies the Xerox Alto’s “raster graphics” concept, where “[s]mall graphical icons were used to symbolize actions or states, and mouse movements and button clicks rather than key strokes were used to communicate with the machine,” as a “key component” serving as a “technical forerunner[] of Andrew.” *Id.* at 184-85. Smith explains that Xerox’s Alto “served as a valuable prototype for Star” and shares “several aspects” of the Star architecture, including raster graphics and reliance on selection of graphics images. Smith at 517-18, 527. Thus, a POSA would understand Morris’ reference to this “key component,” i.e., a GUI based on a raster graphics display, in Xerox Alto would apply equally to adopting that component from Xerox Star. Accordingly, a POSA would be motivated to apply the user interface disclosure in Xerox Star to Morris based on Morris’ explicit statements and would have been an application of a known technique in accordance with its established function to achieve the same result. Moreover, as Morris discloses the ITC system, a POSA would be motivated to combine ITC Project and Xerox Star for the same reasons discussed for Morris and Xerox Star.

HyperCard in view of Rose. It would have been obvious to a person of ordinary skill in the art to combine the publications and documents describing HyperCard with Rose because both describe common subject matter, namely operation of the Macintosh OS, including use of “resources.” *Compare* Goodman at 168 (“Art for an icon is stored in a part of the stack file, the Home

stack file, or in the HyperCard application file itself. This special part of the file is called the Resource Fork.”) *with* Rose at 1-103 (“Macintosh applications make use of many resources, such as menus, fonts, and icons, which are stored in resource files. For example, an icon resides in a resource file as a 32-by-32 bit image”). Accordingly, a person of ordinary skill in the art would have been motivated to apply the additional details of the file format of resource files of Rose to the same subject matter disclosed in Goodman and other publications describing the HyperCard system.

HyperCard in view of Terry. It would have been obvious to a person of ordinary skill in the art to combine the publications and documents describing HyperCard with Terry in order to apply the local caching of a network file system management disclosure of Terry to the retrieval of HyperCard Stacks stored on a network drive. Specifically, Goodman explicitly discloses retrieving HyperCard resources from a network drive: “HyperCard will become the familiar ‘front end’ to information access not only on our own disk drives, but in network file servers.” Goodman at 12. Terry explains that by 1987, “[c]aching [had] become a common technique for reducing the cost of accessing data in a distributed system,” and explains that “distributed systems” includes all types of servers, including “file servers.” Terry at 48. That is, Goodman explicitly discloses storing HyperCard files on network file servers, and Terry explicitly discloses using the “common” caching techniques for caching files on network file servers. Thus, Terry explicitly discloses applying the network file system management disclosure of Terry, including local cache management, to HyperCard. Moreover, Terry discloses an advantage of employing caching: “By maintaining local caches of recently-acquired data, programs can amortize the high cost of querying remote data storage servers over several references to the same information.” Terry at 48. Accordingly, a person of ordinary skill in the art would have been motivated to apply the network file

system management disclosure of Terry, including local cache management, to HyperCard in order to obtain this benefit.

Further, one of the specific systems Terry discusses is the “ITC distributed file system.” Terry at 49. Morris discloses an implementation of the ITC distributed file system using customized Sun workstations named “VIRTUE.” Morris at 186. In addition to that embodiment, Morris explicitly suggests “[s]upporting non-VIRTUE workstations, especially IBM PCs and Apple Macintoshes,” the latter of which runs HyperCard. *Id.* at 199. Accordingly, Morris provides another example of an explicit suggestion in the prior art suggesting to a POSA to apply network file system management, including local cache management, to Macintosh systems such as Goodman. *Id.* Thus, a POSA would have been motivated to apply the network file system management disclosure of Terry, including local cache management, to the disclosure of using a network file system in Goodman based, at least, (1) on the explicit disclosure in Terry, (2) on the explicit disclosure in Morris, and (3) in order to obtain the advantages of caching as disclosed in Terry. Indeed, doing so is also an application of a known technique in accordance with its established function to achieve the same result.

The Trintex Articles. A person of ordinary skill in the art would be motivated to combine the publications and documents describing Trintex because they all explicitly describe the same system and thus their combination achieve the functionality and feature set described applicable to that system.

2. The '849 Patent

As with the '967 patent, the references related to the '849 patent all deal with the same technological field: they are related to the construction of user interfaces in a multiple application environment in which the user interface is constructed from data objects that may be locally stored

and in which advertising information is stored and displayed to users. For example, *Videotex/Tel-text: Principles & Practices* by Antone F. Alber describes the state of the art for videotex and teletext systems, the foundational technologies of both the '967 and '849 patents, as they existed in 1985. Alber describes the use of videotex for targeted advertising and the use of the NAPLPS protocol to construct user interfaces.

Groupon provides the following non-exclusive examples of motivations to combine the various references identified herein.

The Trintex Articles. A person of ordinary skill in the art would be motivated to combine the publications and documents describing Trintex because they all explicitly describe the same system and thus their combination achieve the functionality and feature set described applicable to that system.

Trintex in view of Simon and Alber. A person of ordinary skill in the art would have reason to combine the publications and documents describing Trintex with Simon and/or Alber because they are all directed to videotex systems and specifically to advertising on videotex systems. For example, Trintex 5 explains that advertisements on the Trintex system “are displayed as subscribers view editorial sections,” which requires that a portion of the screen is used to display applications and another portion is used to display advertisements. (Trintex 5 at 1.) Alber discloses an example of such a display. (Alber at Plate 1-1.) And, Simon discloses that videotex pages, including advertising pages, may be sent at any time or automatically stored on the reception system so that they may be subsequently displayed to users. (Simon at 1:37-38.) It would have been obvious to combine the selective storing of advertising on a user’s computer, as disclosed by Simon, with the targeted advertising of Trintex 5 because it would have been combining prior art

elements according to known methods to yield predictable results. And, as the examiner during prosecution of the '849 patent stated:

A person of ordinary skill in the art, given the teachings of Simon et al., would recognize that advertising is changed because some advertisements become untimely, some advertisers may wish to discontinue advertising with the videotex system, discount offers change, etc. When advertisements are removed, the store becomes depletion [sic]. [I]t would have been obvious to replenish the store of advertisements when the store falls below a predetermined level. An example of a predetermined level, as broadly recited, is one.

(Nov. 19, 1998, Examiner's Answer, App. No. 08/158,025, at 22.) That is, a person of ordinary skill in the art would recognize the benefits of locally storing pages and advertisements as disclosed in Simon. By storing advertisements as disclosed by Simon, a person of ordinary skill in the art would recognize that updated advertisements could be readily available for display to the user.

While a preferred embodiment of Simon relates to "offline" display, Simon explains that videotex pages can be sent at any time, i.e., in both online and offline modes. (Simon at 2:48-52.) A person of ordinary skill in the art reading Simon would understand that if a videotex system is capable of displaying applications and advertisements in an offline mode, it could also display the advertisements while in an online mode as disclosed in Trintex 5. Furthermore, the BPAI explicitly recognized the possibility that Simon could be combined with a videotex system, such as that disclosed by Trintex 5. (See Feb. 27, 2002 Decision on Appeal, App. No. 08/158,025 ("BPAI1"), at 22.)

Furthermore, a person of ordinary skill in the art would have been motivated to apply Alber's use of characterizations for targeting advertising with other videotex systems, such as Trintex 5, because doing so would enable specific groups of consumers to be targeted. Dec. 23, 2005, Decision on Appeal, App. No. 08/158,025 ("BPAI2"), at 59 ("One skilled in the advertising and videotex art would have been motivated to establish characterizations (user profiles) based on

compiled data which includes, in part, applications previously requested by the users for the stated reason that ‘it enables specific groups of consumers to be targeted.’”).

Trintex in view of Simon and Wilson. A person of ordinary skill in the art would have been motivated to combine the concept of an “order point” taught by Wilson with the local storage of advertisements taught by Simon because it would have predictably improved the performance of a videotex system that caches advertisements. Simon discloses that videotex pages are stored locally in non-volatile memory or RAM and “have to be updated from time to time, e.g., when the advertising is changed” by downloading them from the central computer. (Simon at 1:37-38.) Although Simon does not provide detail as to exactly when the local store of advertisements needs to be updated, it would have been obvious to a person of ordinary skill in the art to replenish the store of advertisements when the number of current (i.e., not out-of-date) cached advertisements fell below a predetermined level (i.e., an “order point”). By maintaining an “adequate inventory” of advertising objects, a person of ordinary skill in the art would predictably improve the performance of the system by ensuring that the local cache contains an adequate number of current advertising that can be displayed without delay.

Salomon in view of Alber. It would have been obvious to a person of ordinary skill in the art to combine the teachings of Salomon and Alber because, as an initial matter, Alber is explicitly cited by Salomon (*see* Salomon at 81), so a person of ordinary skill in the art would have had a reason to consider the teachings of Alber in connection with Salomon to obtain additional implementation details regarding interactive electronic publishing. Second, both Salomon and Alber relate to the same field of endeavor-electronic publishing. (*See* Salomon at Abstract (“Electronic publishing has been established as a unique means for providing information in an interactive and

personalized manner.”); Alber at 5 (“Information retrieval or electronic publishing, as it is sometimes called, may take several forms.”).) Third, a person of ordinary skill in the art would have been motivated to apply Salomon's teachings of storing content, including advertising content, on a user's local computer and using local software for manipulating that content for the reasons stated in Alber. Namely, as Alber teaches and as discussed below, doing so would have improved the performance of the system and minimized the amount of information transferred over the network.

Alber discloses that “[t]here are two ways in which computational support is provided in public systems.” (Alber at 24.) One is upstream computing, in which user-entered data is processed by software located on the main computer, and the other is downstream computing, where a user's computer executes “telesoftware” downloaded from the main computer. (*Id.*) Alber explains that downstream computing “provides a computer capability far beyond that of a standalone personal computer” and that the “applications made possible by telesoftware and [] interactive [] videotex are endless.” (Alber at 24.) A person of ordinary skill in the art would recognize that using downstream computing (i.e. software running on a user's computer) like the EMAG application disclosed in Salomon would take advantage of the user's computer's local data storage and processing power.

Alber further discloses that “[t]here are several advantages inherent in downstream computing.” (Alber at 25.) First, it can “save the subscriber money by reducing the total connect time” because “[t]here is little or no back-and-forth interchange with the computer system after the initial one.” (*Id.* at 25.) “Second, it can speed up the system responsiveness, since there is no time spent transferring information back and forth or vying with other users for computer resources at the head end of the system.” (*Id.*) A person of ordinary skill in the art would have been motivated to

store advertising data or objects selected for display using downstream software, as disclosed by Salomon, in a videotex system that presents users with interactive applications because, once the content (e.g., advertisement) had been downloaded to the user's computer, there would be little or no back and forth interchange with the computer system, which would save the subscriber money. In addition, it would speed up the system responsiveness because once the advertisement was stored locally, there would be no time spent transferring information back and forth or vying with other users for computer resources at the head end of the system.

In addition, combining the teachings of Salomon with those of Alber would have yielded predictable results. Specifically, selectively storing advertising objects on a user's computer (e.g., claim 1) or storing a predetermined amount of advertising data in a store at the user's computer (e.g., claim 8), and using software running on the user's computer to select what advertising is presented to users, would have had the predictable result of reducing the back and forth interchange with the central computer system after the initial one, and it would have sped up the responsiveness of the system.

3. The '601 Patent

The references related to the '601 patent also all deal with the same technological field: maintenance of state information in networked environments that communicate using stateless protocols. These references also address issues related to resuming "conversations" using stored state information. For example, U.S. Patent No. 5,784,562 to Diener et al. describes an electronic document processing system in which a network communication connection between a server and client must be repeatedly re-established and the prior dialog session context re-associated with continued dialog session communications. The HTML & CGI Unleashed reference discloses the use of a CGI program to modify identified hyperlinks to include state information. Indeed, many of the prior art references provide a teaching or motivation to combine them to arrive at the alleged

inventions claimed in the patents-in-suit. For example, the references describe both the same problem and similar solutions, and in many instances the same stateless protocol, HTTP. Such similarities indicate these references are all directed to the same or a similar technological field and a person of ordinary skill in the art would naturally be aware of and combine these similar and well-known teachings of the references.

Groupon provides the following non-exclusive examples of motivations to combine the various references identified herein.

Unleashed in view of Danish. Danish presents a specific example of the benefits of extending a client based application to the Internet, and Unleashed is both intended to and teaches how to apply known software programming language like CGI and Java in extending application and commerce related activities to the Internet. Based on the intended purpose of Unleashed of educating developers about improved programming languages and techniques, they would naturally consult and apply the teachings of Unleashed as part of developing web services that required state preservation.

Furthermore, both Unleashed and Danish discuss examples of catalog searching and therefore are related by both subject matter and area of work, and a developer would naturally consider the teaching of each in addressing the application of known coding techniques to preserve state and implement the related searching. For example, Unleashed specifically presents component product related searches, as does Danish, and a person of ordinary skill in the art would be motivated to apply existing and alternative search techniques like the parametric component searching disclosed in Danish to the component searching disclosed in Unleashed as part of developing a system that provided further ease of use and additional functionality to an end user that addressed

issues presented in each reference. Similarly, Danish discusses the need to preserve state information and one exemplary solution for same, and Unleashed details additional state preservation techniques that could be applied with software languages that a person of ordinary skill in the art was increasingly interested in applying, such as CGI and Java, and the benefits of applying such languages and disclosed techniques.

In addition, Danish explains that “[t]he widespread use of computers and electronic searching has attracted the attention of large manufacturers offering a vast array of products in an increasingly competitive environment. In an effort to offer product that closely matches customer needs, manufacturers proliferate product and product feature alternatives. This proliferation of product offerings provides the customer with more options from which to choose, however, it also increases the difficulty of finding the one product offering that best addresses a specific customer's needs.” (Danish at 1:30-33.) Danish further explains that “[d]ifferent customers have different preferences, and in many cases a customer is somewhat flexible concerning the product to buy as long as the customer is informed as to how the selection of one alternative affects the availability of another alternative. In addition, one customer may want a red car and accept manual transmission, while another customer must have automatic transmission and color is unimportant. Accordingly, there is a need for a search method that provides information interactively as to how certain alternative selections affect the number of remaining alternatives and/or matching items and allows a user to modify selection priorities during the course of the search.” (Danish at 3:6-17.) Because developers naturally want their search offerings to be friendly and easy to use, this teaching would motivate a person of ordinary skill in the art to apply the search techniques of Danish in combination with the product searches of Unleashed to provide consumers more efficient ways to identify products that are both of interest and not of interest, such as improving the exemplary searches

presented in Unleashed.

Moreover, Danish presents an Internet embodiment of parametric searching, and identifies the need to preserve state and a specific example of how to preserve that state. And, Danish teaches that there are certain restrictions on building an interactive screen with then-current Internet capabilities. (*See* Danish at 18:35-39.) A person of ordinary skill in the art would have been motivated to apply the teachings of Unleashed to overcome those restrictions. Unleashed presents multiple additional ways to preserve state information, including detailed coding examples for preserving such state information. As Unleashed is a reference intended to reach its audience about the application of CGI techniques, including preserving state in a stateless conversation, and a person of ordinary skill in the art would be motivated to consult and apply the teachings in Unleashed as part of the development of catalog searching as detailed in Unleashed and the catalog parametric searching discussed in Danish. Indeed, the intent of Unleashed was to educate developers about the benefits of applying its disclosed techniques in developing web pages and services. Danish presents a web development process, web implementation and tools, scripting techniques, and sample code to explain how certain features, such as state preservation, can be implemented. For example, Unleashed explains that the “clever developer can overcome the statelessness of HTTP by including data in the gateway programs response that the client can then make use of to issue a new request,” and presents techniques for same. (*See* Unleashed at 519; *see also* pp. xxii-xxiii (“Part IV of this book is a complete guide to all aspects of gateway programming, the key to providing interactive services on the Web. Starting off with the basic principles and fundamentals, this part presents many self-contained case studies in such areas as libraries, databases, text search and retrieval, and interactive applications. This part also reviews issues of gateway programming transactions and security as well as special topics and language options for gateway programming.”).)

In addition to the forgoing, to the extent Unleashed does not anticipate claims 9 or 58, it would have been obvious to a person of ordinary skill in the art to combine the concept of filtering hyperlinks or data according to predetermined criteria, as disclosed in Danish, with Unleashed because it was a known method for removing data or hyperlinks before a webpage is displayed for each of the reasons discussed above. Further, to the extent Unleashed does not anticipate claims 10 or 59, it would have been obvious to a person of ordinary skill in the art to combine the concept of addition hyperlinks or data according to predetermined criteria, as disclosed in Danish, with Unleashed for each of the reasons discussed above.

Unleashed in view of Williams. To the extent Unleashed does not anticipate claim 4, it would have been obvious to a person of ordinary skill in the art to combine the concept of dynamically downloading code to the client to perform the step of embedding because Unleashed explains the power and reasoning for using Java when developing web-based services and Williams further explains that “Java supports the notion of client-side validation, offloading appropriate processing onto the client for improved performance. Dynamic, real-time Web pages can be created. Using the above-mentioned custom UI components, dynamic Web pages can also be created.” (Williams at 10:3-5.) Thus, Williams teaches the benefit of applying Java to improve performance by having clients execute functionality such as the state preservation techniques of Unleashed. Therefore, a person of ordinary skill in the art would have been motivated to move the embedding functionality to the client to improve the performance, and reduce the computational burden on the server by offloading processing from the server to the client.

Graber in view of Danish. Graber describes on-line computer services such as, for example, on-line information retrieval services, on-line travel reservation services, or on-line stock trading services, receive new subscribers from various sources. Similarly, Danish relates to on-line

informational retrieval services, namely searching for and obtaining product information. Both references discuss the need to preserve state information in the context of these ecommerce applications, and both references teach examples of how to preserve state information. Given that both references are focused on similar problems in the same field or at a minimum closely related fields and present alternative solutions, one of ordinary skill would naturally apply the teachings of each reference in developing ecommerce applications described by the references.

Furthermore, Graber identifies on-line information systems as an example of where its teachings may be applied. Graber does not, however, disclose the details of user interfaces, such as determining what links to include on a webpage depending on a user's selections, that would need to be developed in connection with the on-line information system. Danish provides detailed examples of the on-line information retrieval systems to which Graber refers. As such, a person of ordinary skill in the art would be motivated to combine the teachings of these references.

In addition, in the context of on-line information retrieval, Danish explains that "[t]he widespread use of computers and electronic searching has attracted the attention of large manufacturers offering a vast array of products in an increasingly competitive environment. In an effort to offer product that closely matches customer needs, manufacturers proliferate product and product feature alternatives. This proliferation of product offerings provides the customer with more options from which to choose, however, it also increases the difficulty of finding the one product offering that best addresses a specific customer's needs." (*See* Danish at 1:30-39.) Danish further explains that "[d]ifferent customers have different preferences, and in many cases a customer is somewhat flexible concerning the product to buy as long as the customer is informed as to how the selection of one alternative affects the availability of another alternative. In addition, one customer may

want a red car and accept manual transmission, while another customer must have automatic transmission and color is unimportant. Accordingly, there is a need for a search method that provides information interactively as to how certain alternative selections affect the number of remaining alternatives and/or matching items and allows a user to modify selection priorities during the course of the search.” (*Id* at 3:6-17.) Because a person of ordinary skill in the art developing the on-line information retrieval systems described in Graber would naturally want an on-line information retrieval to be friendly and easy to use, they would be motivated by Danish to apply its information retrieval concepts to provide consumers more efficient ways to identify products that are both of interest and not of interest, such as removing and adding alternatives resulting from a user’s search selections. For example, Danish teaches that a user friendly informational retrieval service preferably removes unavailable alternatives options and adds back available alternatives as a user updates a search, which a person of ordinary skill in the art would be motivated to apply in view of Danish’s express teachings about developing a user friendly search interface.

Graber in view of Admitted Prior Art. The ’601 Patent describes admitted prior art knowledge of one of ordinary skill in the art as it relates to development of web-based systems. In designing the web-based system disclosed in Graber, a person of ordinary skill in the art would apply their knowledge, experience, and training, including the admitted prior art.

Graber in view of Williams. Graber teaches the use of servers to load HTML web pages to the client. For example, the CGI program called by “page_link.cgi” is a CGI program running on a web page server. (*See* Graber, Figs. 1, 6.) Further, as explained in Williams, “Java supports the notion of client-side validation, offloading appropriate processing onto the client for improved performance. Dynamic, real-time Web pages can be created. Using the above-mentioned custom UI components, dynamic Web pages can also be created.” (Williams at 10:3-5.) Thus, Williams

teaches the benefits of applying Java to improve performance by downloading code to a client to execute functionality such as the state preservation techniques of Graber. Therefore, a person of ordinary skill in the art would have been motivated to move the embedding functionality to the client to improve the performance, and reduce the computational burden on the server by offloading processing from the server to the client.

WebStar in view of Danish. WebStar teaches interfacing with Patient Records contained on Oracle database. (*See* WebStar at 152.) Because a person of ordinary skill in the art developing an interface for patient records would naturally want an on-line information retrieval to be friendly and easy to use, they would be motivated by Danish to apply its information retrieval concepts to provide consumers more efficient ways to identify products that are both of interest and not of interest, such as removing and adding alternatives resulting from a user's search selections. For example, Danish teaches that a user friendly informational retrieval service preferably removes unavailable alternatives options and adds back available alternatives as a user updates a search, which a person of ordinary skill in the art would be motivated to apply in view of Danish's express teachings about developing a user friendly search interface.

Web Star in view of Williams. WebStar teaches the use of servers running Web* to perform certain functions, such as performing state freezing. (*See* WebStar at 150-151.) To the extent WebStar does not anticipate claim 4, it would have been obvious to a person of ordinary skill in the art to combine the concept of dynamically downloading code to the client to perform the step of embedding because, as explained in Williams, "Java supports the notion of client-side validation, offloading appropriate processing onto the client for improved performance. Dynamic, real-time Web pages can be created. Using the above-mentioned custom UI components, dynamic Web pages can also be created." (Williams at 10:3-5.) Therefore, a person of ordinary skill in the art

would have been motivated to move the embedding functionality to the client to improve the performance, and reduce the computational burden on the server by offloading processing from the server to the client.

Spinning the Web in view of Williams. Spinning the Web teaches the use of preserving state information in an HTTP conversation by embedding that information into hyperlinks to be sent to a user's browser. To the extent that Spinning the Web does not disclose claims 4 and 5, it would have been obvious to a person of ordinary skill in the art to combine the concept of dynamically downloading code to the client to perform the step of embedding because Spinning the Web explains the power and reasoning for using Java or Javascript for running client-side program code when developing web-based services, and Williams further explains that "Java supports the notion of client-side validation, offloading appropriate processing onto the client for improved performance. Dynamic, real-time Web pages can be created. Using the above-mentioned custom UI components, dynamic Web pages can also be created." (Williams at 10:3-5.) Thus, Williams teaches the benefit of applying Java to improve performance by having clients download code to execute functionality such as the state preservation techniques of Spinning the Web. Therefore, a person of ordinary skill in the art would have been motivated to move the embedding functionality to the client to improve the performance, and reduce the computational burden on the server by offloading processing from the server to the client.

Spinning the Web in view of Unleashed and Danish. Unleashed is both intended to and teaches how to apply known software programming language like CGI and Java in extending application and commerce related activities to the Internet. Based on the intended purpose of Unleashed of educating developers about improved programming languages and techniques, they would naturally consult and apply the teachings of Unleashed as part of developing web services

that required state preservation, such as in fleshing out the examples of state preservation and web development found in *Spinning the Web*.

Furthermore, both *Spinning the Web* and *Unleashed* relate to the development of web technologies of various kinds, including HTML and CGI, and therefore are related by both subject matter and area of work, and a developer would naturally consider the teaching of each in addressing the application of known coding techniques to preserve state and implement the related searching. For example, *Unleashed* specifically presents component product related searches and a person of ordinary skill in the art would be motivated to apply search techniques disclosed in *Unleashed* as part of developing a system that provided further ease of use and additional functionality to an end user that addressed issues presented in each reference. Similarly, *Spinning the Web* discusses the need to preserve state information and exemplary solutions doing so, and *Unleashed* details additional state preservation techniques that could be applied with software languages that a person of ordinary skill in the art was increasingly interested in applying, such as CGI and Java, and the benefits of applying such languages and disclosed techniques. For example, *Unleashed* explains that the “clever developer can overcome the statelessness of HTTP by including data in the gateway programs response that the client can then make use of to issue a new request,” and presents techniques for same. (*See Unleashed* at 519; *see also* pp. xxii-xxiii (“Part IV of this book is a complete guide to all aspects of gateway programming, the key to providing interactive services on the Web. Starting off with the basic principles and fundamentals, this part presents many self-contained case studies in such areas as libraries, databases, text search and retrieval, and interactive applications. This part also reviews issues of gateway programming transactions and security as well as special topics and language options for gateway programming.”).) In addition to the forgoing, to the extent *Unleashed* does not anticipate claims 9 or 58, it would have been obvious

to a person of ordinary skill in the art to combine the concept of filtering hyperlinks or data according to predetermined criteria, as disclosed in Danish, with Unleashed and Spinning the Web because it was a known method for removing data or hyperlinks before a webpage is displayed for each of the reasons discussed above. Further, to the extent Unleashed does not anticipate claims 10 or 59, it would have been obvious to a person of ordinary skill in the art to combine the concept of addition hyperlinks or data according to predetermined criteria, as disclosed in Danish, with Unleashed for each of the reasons discussed above.

The Amazon 1995 Website in view of Williams. The 1995 Amazon Website teaches the use of preserving state information in an HTTP conversation by embedding that information into hyperlinks to be sent to a user's browser, cookies, and HTML Forms with state information embedded in the submission URL. To the extent that The 1995 Amazon Website does not disclose claims 4 and 5, it would have been obvious to a person of ordinary skill in the art to combine the concept of dynamically downloading code to the client to perform the step of embedding because Williams explains that "Java supports the notion of client-side validation, offloading appropriate processing onto the client for improved performance. Dynamic, real-time Web pages can be created. Using the above-mentioned custom UI components, dynamic Web pages can also be created." (Williams at 10:3-5.) Thus, Williams teaches the benefit of applying Java to improve performance by having clients download code to execute functionality such as the state preservation techniques of The 1995 Amazon Website. Therefore, a person of ordinary skill in the art would have been motivated to move the embedding functionality to the client to improve the performance, and reduce the computational burden on the server by offloading processing from the server to the client.

The Amazon 1995 Website in view of Unleashed and Danish. Unleashed is both intended to and teaches how to apply known software programming language like CGI and Java in extending application and commerce related activities to the Internet. Based on the intended purpose of Unleashed of educating developers about improved programming languages and techniques, they would naturally consult and apply the teachings of Unleashed as part of developing web services that required state preservation, such as in fleshing out the examples of state preservation and web development found in The Amazon 1995 Website.

Furthermore, Unleashed relates to the development of web technologies of various kinds, including HTML and CGI, and The Amazon 1995 Website is an operating example of web technologies of the time, and therefore they references are related by both subject matter and area of work, and a developer would naturally consider the teaching of each in addressing the application of known coding techniques to preserve state and implement the related searching. For example, Unleashed specifically presents component product related searches and a person of ordinary skill in the art would be motivated to apply search techniques disclosed in Unleashed as part of developing a system that provided further ease of use and additional functionality to an end user that addressed issues presented in each reference. Similarly, The Amazon 1995 Website attempts to preserve state information in multiple ways, and Unleashed details additional state preservation techniques that could be applied with software languages that a person of ordinary skill in the art was increasingly interested in applying, such as CGI and Java, and the benefits of applying such languages and disclosed techniques. For example, Unleashed explains that the “clever developer can overcome the statelessness of HTTP by including data in the gateway programs response that the client can then make use of to issue a new request,” and presents techniques for same. (*See* Unleashed at 519; *see also* pp. xxii-xxiii (“Part IV of this book is a complete guide to all aspects

of gateway programming, the key to providing interactive services on the Web. Starting off with the basic principles and fundamentals, this part presents many self-contained case studies in such areas as libraries, databases, text search and retrieval, and interactive applications. This part also reviews issues of gateway programming transactions and security as well as special topics and language options for gateway programming.”.) This is similar to the technique actually applied by The Amazon 1995 Website. In addition to the forgoing, to the extent Unleashed does not anticipate claims 9 or 58, it would have been obvious to a person of ordinary skill in the art to combine the concept of filtering hyperlinks or data according to predetermined criteria, as disclosed in Danish, with Unleashed and The Amazon 1995 Website because it was a known method for removing data or hyperlinks before a webpage is displayed for each of the reasons discussed above. Further, to the extent Unleashed does not anticipate claims 10 or 59, it would have been obvious to a person of ordinary skill in the art to combine the concept of addition hyperlinks or data according to predetermined criteria, as disclosed in Danish, with Unleashed and The Amazon 1995 Website for each of the reasons discussed above.

Furthermore, both Unleashed and Danish discuss examples of catalog searching and therefore are related by both subject matter and area of work, and a developer would naturally consider the teaching of each in addressing the application of known coding techniques to preserve state and implement the related searching. For example, Unleashed specifically presents component product related searches, as does Danish, and a person of ordinary skill in the art would be motivated to apply existing and alternative search techniques like the parametric component searching disclosed in Danish to the component searching disclosed in Unleashed as part of developing a system that provided further ease of use and additional functionality to an end user that addressed

issues presented in each reference. Similarly, Danish discusses the need to preserve state information and one exemplary solution for same, and Unleashed details additional state preservation techniques that could be applied with software languages that a person of ordinary skill in the art was increasingly interested in applying, such as CGI and Java, and the benefits of applying such languages and disclosed techniques.

In addition, Danish explains that “[t]he widespread use of computers and electronic searching has attracted the attention of large manufacturers offering a vast array of products in an increasingly competitive environment. In an effort to offer product that closely matches customer needs, manufacturers proliferate product and product feature alternatives. This proliferation of product offerings provides the customer with more options from which to choose, however, it also increases the difficulty of finding the one product offering that best addresses a specific customer's needs.” (Danish at 1:30-33.) Danish further explains that “[d]ifferent customers have different preferences, and in many cases a customer is somewhat flexible concerning the product to buy as long as the customer is informed as to how the selection of one alternative affects the availability of another alternative. In addition, one customer may want a red car and accept manual transmission, while another customer must have automatic transmission and color is unimportant. Accordingly, there is a need for a search method that provides information interactively as to how certain alternative selections affect the number of remaining alternatives and/or matching items and allows a user to modify selection priorities during the course of the search.” (Danish at 3:6-17.) Because developers naturally want their search offerings to be friendly and easy to use, this teaching would motivate a person of ordinary skill in the art to apply the search techniques of Danish in combination with the product searches of Unleashed to provide consumers more efficient ways to identify products that are both of interest and not of interest, such as improving the exemplary searches

presented in Unleashed.

Moreover, Danish presents an Internet embodiment of parametric searching, and identifies the need to preserve state and a specific example of how to preserve that state. And, Danish teaches that there are certain restrictions on building an interactive screen with then-current Internet capabilities. (*See* Danish at 18:35-39.) A person of ordinary skill in the art would have been motivated to apply the teachings of Unleashed to overcome those restrictions. Unleashed presents multiple additional ways to preserve state information, including detailed coding examples for preserving such state information. As Unleashed is a reference intended to reach its audience about the application of CGI techniques, including preserving state in a stateless conversation, and a person of ordinary skill in the art would be motivated to consult and apply the teachings in Unleashed as part of the development of catalog searching as detailed in Unleashed and the catalog parametric searching discussed in Danish. Indeed, the intent of Unleashed was to educate developers about the benefits of applying its disclosed techniques in developing web pages and services. Danish presents a web development process, web implementation and tools, scripting techniques, and sample code to explain how certain features, such as state preservation, can be implemented. For example, Unleashed explains that the “clever developer can overcome the statelessness of HTTP by including data in the gateway programs response that the client can then make use of to issue a new request,” and presents techniques for same. (*See* Unleashed at 519; *see also* pp. xxii-xxiii (“Part IV of this book is a complete guide to all aspects of gateway programming, the key to providing interactive services on the Web. Starting off with the basic principles and fundamentals, this part presents many self-contained case studies in such areas as libraries, databases, text search and retrieval, and interactive applications. This part also reviews issues of gateway programming transactions and security as well as special topics and language options for gateway programming.”).)

In addition to the forgoing, to the extent Unleashed does not anticipate claims 9 or 58, it would have been obvious to a person of ordinary skill in the art to combine the concept of filtering hyperlinks or data according to predetermined criteria, as disclosed in Danish, with Unleashed because it was a known method for removing data or hyperlinks before a webpage is displayed for each of the reasons discussed above. Further, to the extent Unleashed does not anticipate claims 10 or 59, it would have been obvious to a person of ordinary skill in the art to combine the concept of addition hyperlinks or data according to predetermined criteria, as disclosed in Danish, with Unleashed for each of the reasons discussed above.

4. The '346 Patent

The references related to the '346 patent also all deal with the same technological field: exchange of user information for single sign-on functionality and the creation of user accounts in a seamless manner in a federated computing environment. Many of the references provide a teaching or motivation to combine them to arrive at the alleged invention of the '346 patent. For example, the references describe both the same problem and similar solutions, and many use the same language to describe the problems and solutions, such as “automated login,” “single sign-on”, and “identity provider.” Because such similarities, *inter alia*, indicate that these references are all directed to the same or a similar technological field, a person of ordinary skill in the art would naturally be aware of and combine these similar and well-known teachings of the references.

Groupon provides the following non-exclusive examples of motivations to combine the various references identified herein.

As described by Liberty Alliance, Grandcolas, Pfitzmann, Sunada, and Mellmer, it was known that a user could have several accounts at several service providers and that single-sign-on procedures provided a way to reduce the administrative burden on users and system administrators in creating and maintaining those accounts. Moreover, it was known that local accounts were

required for accessing protected resources at service providers. (*See, e.g.*, '346 patent at 1:28-30.) A person of ordinary skill in the art would have been motivated to use the concept of runtime account creation as disclosed by Grandcolas, Sunada, or Mellmer, with known single-sign-on systems as disclosed by Liberty Alliance or Pfitzmann because it would have: (1) reduced the administrative burden on identity providers and service providers of having to create all service provider user accounts *a priori*, and (2) provided a known and desirable alternative to refusing service to a user that is known to an identity provider that is federated with a service provider. Moreover, implementing runtime account creation with known single-sign-on solutions would have predictably enabled a user to have a cohesive, tangible network identity while “enable[ing] businesses to maintain and manage their customer relationships without third-party participation.” (Liberty Alliance Specification at 7.) For example, Sunada discloses that “[i]f there is no user account, it obtains information regarding the user from the SSO server 1, uses attribute association information in the attribution association database 24 to automatically generate user account information, and registers it in the user account information database 23.” (Sunada at Means for Resolution; *see also* Mellmer at Fig. 34.)

Furthermore, to the extent that any of the references are found to not teach user authentication operations in a federated environment as required by claim 1, federated computing environments, such as those described in Liberty Alliance, Doshi, Grandcolas, Harris, Moreh, Weissman, and Yared were known. Moreover, it would have been obvious to a person of ordinary skill in the art to combine user authentication schemes with federated computer environment because of the added level of access between those systems, the pre-established trust between those systems, and the lack of need of a single centralized identity service. (*See, e.g.*, Harris at 1-2.)

In addition, to the extent that any of the prior art references are found to not teach creating requesting additional information from an identity provider before creating an account, it would have been obvious to implement that functionality with known single-sign-on solutions because the identity provider is known to have user information and it was known that multiple requests could be made of an identity provider to gain additional information about a user attempting to use that identity provider for single-sign-on. (*See, e.g.,* Pfitzmann.) Similarly, as disclosed in Sunada, it was known that multiple requests for information may be required before a user account could be created. (*See* Sunada at Fig. 3, S37-S38.)

A person of ordinary skill in the art would have found it obvious to add runtime account creation to known single sign on solutions because it would have been applying a known technique to a known device (method, or product) ready for improvement to yield predictable results. For example, creating accounts on the fly as part of a single sign on operation was a known technique for conveniently creating an account for a user on the fly before that user can access a protected resource. (*See* Sunada; *see also* Mellmer.) Known single sign on solutions, such as Pfitzmann, that did not use or disclose on-the-fly account creation, were ready for improvement to add that on-the-fly account creation functionality because it would have predictably added the convenience of an automatically-created account without imposing additional steps or requirements on the user or system administrators. Furthermore, users would have “expect[ed] that computer systems coordinate their actions so that burdens on the user are reduced.” (’346 patent at 1:25-27.) The predictable result would be that an account would be created on the fly (and therefore predictably reduce the burden on the user) and would permit the user to access certain resources that are only accessible to those with an account. Such automation of the account creation process is exactly the type of coordination between computer systems that users would have expected. (*See id.*)

To the extent that any of the prior art references are found to not teach performing a preliminary user account creation operation to commence creation of the user account for the user prior to retrieving user attribute information for the user, it would have been obvious to implement that functionality because it would have enabled the service provider to make a record of incomplete user account data while additional necessary data was retrieved. For example, Pfizmann discloses multiple requests and responses for attributes, which would have yielded the predictable result of supplying additional information if it is determined that additional information is necessary. However, by implementing a preliminary user account creation operation, intermediate user attributes could be stored until they could be used for a completing account creation step when additional user attribute information is available.

To the extent that any of the prior art references are found to not teach performing a concluding user account creation operation to complete creation of the user account for the user after retrieving user attribute information for the user, it would have been obvious to implement that functionality. For example, Sunada discloses, “Upon putting together information necessary for creating the user account in this manner, S39 creates the user account information and registers it with the user account information database 23. With this, in a case where the access state is that of being logged in, the user account information now exists.” (Sunada at 35.) Adding such a concluding user account creation operation would allow the account to be created on the fly, which in turn would provide the predictable result of increasing the convenience for the user and reducing the administrative burden on system administrators.

By way of further example, Liberty Alliance teaches detailed exchange of information in the form of industry standardized single-on sign operations in Federated Systems, but does not expressly teach the creation of user accounts during single sign-on. Grandcolas teaches single-

sign-on operations in Federated Systems, including the creation of user accounts at a service provider when such an account does not exist. One of ordinary skill in the art would be motivated to combine the teachings of Grandcolas for commercial, customer experience, and each of use operations. For example, one of ordinary skill in the art would be motivated to use the implementation details found in Liberty Alliance to ensure broader adoption and easier application of the disclosed infrastructures, software, and web services. Indeed, the goals of the Liberty Alliance specifically included defining standards for developing identity-based infrastructures, software, and web services as disclosed Grandcolas, and to promote adoption of these standards in such infrastructures, software, and web services. And, Liberty Alliance encouraged adoption of its teaching is federated single sign-on services like Grandcolas.

In addition, Pfitzmann discloses detailed exchange of information in the form of industry standardized and/or extensively adopted single-on sign operations in Federated Systems, including Liberty Alliance, Microsoft Passport, Security Assertions Markup Language, Shibboleth, IBM e-Community SSO, but does not expressly teach the creation of user accounts during single sign-on. Sunada and Melmer teach single-on operations in Federated Systems, including the creation of user accounts at a service provider when such an account does not exist. One of ordinary skill in the art would be motivated to combine the teachings of Pfitzmann for commercial, customer experience, and each of use operations with those of Sunada or Melmer. The different single-sign operations are matters of obvious design choice, and the disclosed operations are substantially similar as disclosed in Figure 2 of Pfitzmann. One of ordinary skill in the art would be motivated to use the implementation details found in industry standardized and/or extensive adopted protocols to ensure broader adoption and easier application of the respective disclosed infrastructures,

software, and web services. Indeed, the goals of the of these organizations, such as Liberty Alliance, specifically included defining standards for developing identity-based infrastructures, software, and web services as disclosed Pfitzmann, and to promote adoption of these standards in such infrastructures, software, and web services. And, Liberty Alliance encouraged adoption of its teaching is federated single sign-on services like Sunada and Mellmer.

Furthermore, Pfitzman explains that security and privacy concerns of users have hampered adoption of single sign-on systems. Pfitzmann discloses techniques to address these concerns in the context of Federated Single Sign-On, and one of ordinary skill would be motivated by commercial and user experience considerations to apply the teachings of Pfitzman, including industry standardized protocols and additional design considerations, in developing the systems of Sunada and Melmer to ensure broader adoption.

For all of the patents-in-suit, the identified references, alone or in combination, also contain an explicit and/or implicit teaching, suggestion, motivation, or inference to combine them within the references themselves, as well as within the knowledge of those of ordinary skill in the art. These references identify and address the same technical issues and suggest similar solutions to those issues. Moreover, many of these references cross-reference and discuss one another, providing an explicit motivation to combine such references and further illustrating the close technical relationship among this group of references. Indeed, multiple references were authored or developed by the same person(s) and/or companies. If and to the extent that IBM challenges the applicability of any of these references with respect to particular limitations of the asserted claims of the patents-in-suit, Groupon reserves the right to supplement this disclosure to provide additional explanation for why particular references should and could be combined with one another.

Groupon may also rely on expert testimony to establish that the asserted claims of the patents-in-suit are invalid as obvious.

For all of the patents-in-suit, the identified references, alone or in combination, also contain an explicit and/or implicit teaching, suggestion, motivation, or inference to combine them within the references themselves, as well as within the knowledge of those of ordinary skill in the art. These references identify and address the same technical issues and suggest similar solutions to those issues. Moreover, many of these references cross-reference and discuss one another, providing an explicit motivation to combine such references and further illustrating the close technical relationship among this group of references. Indeed, multiple references were authored or developed by the same person(s) and/or companies. If and to the extent that IBM challenges the applicability of any of these references with respect to particular limitations of the asserted claims of the patents-in-suit, Groupon reserves the right to supplement this disclosure to provide additional explanation for why particular references should and could be combined with one another. Groupon may also rely on expert testimony to establish that the asserted claims of the patents-in-suit are invalid as obvious.²

The combinations of references provided above and in the accompanying prior art reference charts in Exhibits A1-A30, B1-B27, C1-C28, and D1-25 are exemplary and are not intended to be exhaustive. Additional obviousness combinations of the references identified herein are possible, and Groupon reserves the right to use any such combination(s) in this litigation. In particular, Groupon is currently unaware of IBM's allegations with respect to the level of skill in the art and

² The references identified in this section are only examples of the references that one of ordinary skill in the art would consider to be part of the same body of work and in same technical field and is not meant to be limiting in any way.

the qualifications of the typical person of ordinary skill in the art. Groupon is also unaware of the extent, if any, to which IBM may contend that limitations of the claims at issue are not disclosed in the prior art identified by Groupon as anticipatory and the extent to which IBM will contend that elements not disclosed in the specifications of the patents-in-suit would have been known to persons of skill in the art. Groupon reserves the right to supplement this disclosure to identify other references that would have made such limitations obvious in view of the relevant disclosures.

B. 35 U.S.C. § 112

As noted below, some of the asserted claims of the patents-in-suit are invalid as indefinite (35 U.S.C. § 112 ¶ 2), lacking a proper written description (35 U.S.C. § 112 ¶ 1), and/or failing to enable one of ordinary skill in the art at the time the invention was made to make or use the alleged invention (35 U.S.C. § 112 ¶ 1). The following identification of claims and claim elements are only exemplary, and Groupon reserves the right to supplement the identification of claims and claim elements that do not comply with the requirements of 35 U.S.C. § 112. Specifically, Groupon reserves the right to identify additional claims and claim elements that do not comply with the requirements of 35 U.S.C. § 112 after the Court construes the claims in this case.

1. The '967 Patent

Claims 1-17 fail to comply with 35 U.S.C. § 112 ¶ 2 because a person of ordinary skill at the time of the invention would have been unable to distinguish between “applications,” under IBM’s apparent application of that term. IBM contends different “applications” can be delineated by examining the sequence of pages used in one application versus another. *See* IBM’s Final Infringement Contentions, Exhibit A at p. 3 (“The sequence of pages for purchasing local vouchers on the Local/Nearby application distinguishes it from other applications that have their own sequence of pages. For example, switching from purchasing local vouchers to purchasing goods starts a new sequence of pages, and thus a new application.”). Groupon does not agree that a

delineation based on this criteria is possible and contends the term is indefinite. Groupon further does not agree that different applications have been accurately identified in the accused websites and mobile applications in IBM's Infringement Contentions.

The phrase "the predetermined plan" in claim 4 fails to comply with 35 U.S.C. § 112 ¶ 2 because it lacks antecedent basis. Claims 4-9 are accordingly indefinite.

The phrase "the navigation procedures includes enabling the user to access a physical analogy of the available applications from which a desired application may be selected" fails to comply with 35 U.S.C. § 112 ¶ 2, rendering claim 8 indefinite.

Claims 1-17 fail to comply with 35 U.S.C. § 112 ¶ 1 in that the specification lacks support for a "computer network" or "network" to the extent that term is construed to encompass a reception system obtaining objects from anything other than a single central host computer.

2. The '849 Patent

Claims 1, 8, and 14 fail to comply with 35 U.S.C. § 112 ¶ 2 because a person of ordinary skill at the time of the invention would have been unable to distinguish between "applications," under IBM's apparent application of that term. IBM contends different "applications" can be delineated by examining the sequence of pages used in one application versus another. *See* IBM's Final Infringement Contentions, Exhibit B at p. 11 ("The sequence of pages for purchasing local vouchers on the Local/Nearby application distinguishes it from other applications that have their own sequence of pages. For example, switch-ing from purchasing local vouchers to purchasing goods starts a new sequence of pages, and thus a new application.")). Groupon does not agree that a delineation based on this criteria is possible and contends the term is indefinite. Groupon further does not agree that different applications have been accurately identified in the accused websites and mobile applications in IBM's Infringement Contentions.

The terms “structuring applications” and “structuring advertising” fail to comply with 35 U.S.C. § 112 ¶ 1 because the specification fails to describe how applications or advertising may be “structured,” at least under IBM’s apparent construction.

The phrase “structuring advertising in a manner compatible to that of the applications” fails to comply with 35 U.S.C. § 112 ¶ 2 because, at least based on the apparent construction of this term in IBM’s Final Infringement Contentions, it would not be clear to a person of ordinary skill in the art what it takes for the structure of advertising to be “compatible” with that of the applications.

The phrases “advertising object” and “advertising data” fail to comply with 35 U.S.C. § 112 ¶ 2 because, at least based on the apparent constructions adopted in IBM’s Final Infringement Contentions, it would not be clear to a person of ordinary skill in the art how to distinguish “advertising object” from “advertising data.”

Claims 1-21 fail to comply with 35 U.S.C. § 112 ¶ 1 in that the specification lacks support for a “computer network” or “network” to the extent that term is construed to encompass a reception system obtaining objects from anything other than a single central host computer.

3. The ’601 Patent

The phrase “filtering one of said hyperlinks and data output from said services according to a predetermined criteria” fails to comply with 35 U.S.C. § 112 ¶ 1 because the specification fails to describe how the filtering is performed, at least under IBM’s apparent construction.

The phrase “adding one of said hyperlinks and data to said output from said services according to a predetermined criteria” fails to comply with 35 U.S.C. § 112 ¶ 1 because the specification fails to describe how the filtering is performed, at least under IBM’s apparent construction.

The phrase “dynamically downloading computer program code to the client to perform said step of embedding which is responsive to said step of communicating the output to the

client” fails to comply with 35 U.S.C. § 112 ¶ 1 because the specification fails to describe how the filtering is performed, at least under IBM’s apparent construction.

Claim 63 fails to comply with 35 U.S.C. § 112 ¶ 2 because the claim upon which it depends, Claim 60, requires communicating “a response including the continuations and embedded state information” meaning that communicating must occur after the embedding step. Claim 63 states that embedding occurs after (and responsive to) the communicating, which is impossible.

4. The ’346 Patent

The phrase “back-channel information retrieval mechanism” fails to comply with 35 U.S.C. § 112 ¶ 2, rendering claim 8 indefinite.

C. 35 U.S.C. § 101

The asserted claims of the ’967 patent are invalid under 35 U.S.C. § 101 for failure to recite patentable subject matter. Groupon incorporates by reference its arguments presented in the briefing for its motion for judgment on the pleadings. (D.I. 29, 39, 167.) The asserted claims of the ’849 patent are invalid under 35 U.S.C. § 101 for failure to recite patentable subject matter. Groupon incorporates by reference its arguments presented in the briefing for its motion for judgment on the pleadings. (D.I. 29, 39, 167.)

II. ACCOMPANYING DOCUMENT PRODUCTION

Groupon has produced invalidating prior art references and corroborating evidence concerning prior art systems, including the prior art references described in this document and the attached exhibits. These prior art references and corroborating evidence are cited in and support the provided invalidity claim charts.

Dated: September 25, 2017

Of counsel:

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Email: dhadden@fenwick.com
Saina S. Shamilov
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Mountain View, CA 94041
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By: /s/ Phillip J. Haack

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Counsel for Defendant
GROUPON, INC.

CERTIFICATE OF SERVICE

I hereby certify that on this 25th day of September, 2017, a true and correct copy of the foregoing document was served on each party through their counsel of record via email.

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*Attorneys for Defendant
GROUPON, INC.*

EXHIBIT H

From: Sapna Mehta
To: [Laurie Stempler](#); [Saina Shamilov](#); [Groupon IBM Service@Fenwick.com](#)
Cc: [IBM Groupon Service](#); ["dmoore@potteranderson.com"](#); ["bpalapura@potteranderson.com"](#); [Day, John G. \(jday@ashby-geddes.com\)](#)
Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)
Date: Thursday, July 12, 2018 23:07:33
Attachments: [RE IBM v. Groupon - Groupon's Election of Prior Art.msg](#)

Laurie,

The correspondence you attached does not respond to Groupon's request. During the parties' meet and confer, we asked IBM to explain what it meant by "all relevant license agreements." Specifically, to confirm whether IBM is representing that it has no license agreements or any documents related to efforts to license the patents-in-suit since the date of its last production. IBM agreed to check and get back to us, as indicated in the attached. To date, we have not received a clear response. Please confirm IBM's position.

The witness tomorrow is Brian Stevens. Groupon will not agree to videotaping of the deposition given that our agreement was conditioned on it being solely for the purpose of allowing Dr. Hausman to understand and update his calculations. If IBM insists, Groupon does not agree to the deposition.

Sapna

From: Laurie Stempler [mailto:LStempler@desmaraisllp.com]
Sent: Thursday, July 12, 2018 8:41 PM
To: Sapna Mehta <smehta@fenwick.com>; Saina Shamilov <sshamilov@fenwick.com>; Groupon_IBM_Service@Fenwick.com
Cc: IBM Groupon Service <IBMGrouponService@desmaraisllp.com>; 'dmoore@potteranderson.com' <dmoore@potteranderson.com>; 'bpalapura@potteranderson.com' <bpalapura@potteranderson.com>; Day, John G. (jday@ashby-geddes.com) <jday@ashby-geddes.com>
Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Sapna,

The names of the court reporter and videographer are Stephanie Battaglia and Jean-Louis Ziesch.

Laurie

From: Laurie Stempler
Sent: Thursday, July 12, 2018 8:23 PM
To: Sapna Mehta <smehta@fenwick.com>; Saina Shamilov <sshamilov@fenwick.com>; Groupon_IBM_Service@Fenwick.com

Cc: IBM Groupon Service <IBMGrouponService@desmaraisllp.com>; 'dmoore@potteranderson.com' <dmoore@potteranderson.com>; 'bpalapura@potteranderson.com' <bpalapura@potteranderson.com>; Day, John G. (jday@ashby-geddes.com) <jday@ashby-geddes.com>

Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Sapna,

Who is the witness being made available? We will provide the names of the court reporter & videographer as soon as we have them.

We have already provided our position on the discovery responses that you raise below. Please see the attached correspondence.

Laurie

From: Sapna Mehta <smehta@fenwick.com>

Sent: Thursday, July 12, 2018 8:13 PM

To: Laurie Stempler <LStempler@desmaraisllp.com>; Saina Shamilov <sshamilov@fenwick.com>; Groupon_IBM_Service@Fenwick.com

Cc: IBM Groupon Service <IBMGrouponService@desmaraisllp.com>; 'dmoore@potteranderson.com' <dmoore@potteranderson.com>; 'bpalapura@potteranderson.com' <bpalapura@potteranderson.com>; Day, John G. (jday@ashby-geddes.com) <jday@ashby-geddes.com>

Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Laurie,

The deposition tomorrow will take place at Marshall Gerstein. I'll follow-up with the video bridge. Also, a videographer is not necessary; as I noted below the sole purpose of this deposition is to allow Dr. Hausman to update his calculations. Please provide the court reporter's name for building security.

Also, we have not heard back from you following your earlier email that you would get back to us shortly regarding Groupon's request that IBM supplement its discovery responses. Please provide IBM's response.

Sapna

From: Sapna Mehta

Sent: Thursday, July 12, 2018 2:29 PM

To: Laurie Stempler <LStempler@desmaraisllp.com>; Saina Shamilov <sshamilov@fenwick.com>; Groupon_IBM_Service@Fenwick.com

Cc: IBM Groupon Service <IBMGrouponService@desmaraisllp.com>; 'dmoore@potteranderson.com' <dmoore@potteranderson.com>; 'bpalapura@potteranderson.com'

<bpalapura@potteranderson.com>; Day, John G. (jday@ashby-geddes.com) <jday@ashby-geddes.com>

Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Laurie,

The deposition will take place from 4:30-5:30p central tomorrow. I'm confirming the location and will get back to you with that and the video bridge.

Sapna

From: Laurie Stempler [<mailto:LStempler@desmaraisllp.com>]

Sent: Thursday, July 12, 2018 1:00 PM

To: Sapna Mehta <smehta@fenwick.com>; Saina Shamilov <sshamilov@fenwick.com>; Groupon_IBM_Service@Fenwick.com

Cc: IBM Groupon Service <IBMGrouponService@desmaraisllp.com>; 'dmoore@potteranderson.com' <dmoore@potteranderson.com>; 'bpalapura@potteranderson.com' <bpalapura@potteranderson.com>; Day, John G. (jday@ashby-geddes.com) <jday@ashby-geddes.com>

Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Sapna,

Thank you for agreeing to make a witness available and to provide video arrangements, which we will need because we will be taking the deposition by video. Please confirm a time and location for the deposition so that we can make the necessary arrangements for the court reporter and videographer.

We'll get back to you shortly regarding the discovery responses.

Regards,
Laurie

From: Sapna Mehta <smehta@fenwick.com>

Sent: Thursday, July 12, 2018 9:51 AM

To: Laurie Stempler <LStempler@desmaraisllp.com>; Saina Shamilov <sshamilov@fenwick.com>; Groupon_IBM_Service@Fenwick.com

Cc: IBM Groupon Service <IBMGrouponService@desmaraisllp.com>; 'dmoore@potteranderson.com' <dmoore@potteranderson.com>; 'bpalapura@potteranderson.com' <bpalapura@potteranderson.com>; Day, John G. (jday@ashby-geddes.com) <jday@ashby-geddes.com>

Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Laurie,

I left you a voicemail just now to follow-up on our conversation yesterday.

Groupon did not withhold any information from IBM. IBM demanded updated financial spreadsheets and Groupon produced them. When you raised questions regarding the margin, we asked you to explain why that information was necessary for Dr. Hausman to update his calculations (which you described to the Court as "just math") so that we could understand and evaluate your request for a third deposition of Groupon's witness. You did not explain. We nonetheless investigated your questions in good faith. [REDACTED]

[REDACTED]
[REDACTED] We still have no explanation from IBM as to why Dr. Hausman requires further information to update his calculations.

In an effort to resolve this dispute, however, Groupon will agree to make a witness available in Chicago for a one hour deposition on Friday, provided that the deposition is solely for the purpose of updating the calculations in Dr. Hausman's damages report.

Please confirm IBM's agreement to this proposal. We can look into video arrangements, if needed. Also, we would appreciate a response on our outstanding request that IBM supplement its discovery responses. Groupon requests that IBM produce the requested documents today so that Groupon's damages expert can also update his opinion.

Sapna

From: Laurie Stempler [<mailto:LStempler@desmaraisllp.com>]

Sent: Tuesday, July 10, 2018 2:28 PM

To: Sapna Mehta <smehta@fenwick.com>; Saina Shamilov <sshamilov@fenwick.com>;
Groupon_IBM_Service@Fenwick.com

Cc: IBM Groupon Service <IBMGrouponService@desmaraisllp.com>; 'dmoore@potteranderson.com' <dmoore@potteranderson.com>; 'bpalapura@potteranderson.com' <bpalapura@potteranderson.com>; Day, John G. (jday@ashby-geddes.com) <jday@ashby-geddes.com>

Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Sapna,

It's unclear why your team assumed the issue was resolved when there was no way IBM could have guessed, from the new data you produced in June, the explanation that you provided below.

[REDACTED]
[REDACTED]
[REDACTED] We also need to

understand who provided the explanation in your email below and why that information was withheld from us when the new data was produced in June.

Once again, will Groupon provide a witness for a short deposition?

Laurie

From: Sapna Mehta <smehta@fenwick.com>

Sent: Monday, July 9, 2018 7:59 PM

To: Laurie Stempler <LStempler@desmaraisllp.com>; Saina Shamilov <sshamilov@fenwick.com>; Groupon_IBM_Service@Fenwick.com

Cc: IBM Groupon Service <IBMGrouponService@desmaraisllp.com>; 'dmoore@potteranderson.com' <dmoore@potteranderson.com>; 'bpalapura@potteranderson.com' <bpalapura@potteranderson.com>; Day, John G. (jday@ashby-geddes.com) <jday@ashby-geddes.com>

Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Laurie,

Having not heard from you in two weeks, we assumed your questions were resolved. Nonetheless, we have investigated the trends you raised with Groupon. Below is an explanation. With this, please confirm that IBM will provide Professor Hausman's supplemental report by end of day on Wednesday this week so that Groupon has a chance to review and respond as necessary before trial begins.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]

Finally, IBM has not responded to Jessica's email from last week following our meet and confer regarding IBM's supplementation of its discovery responses. Nor has it responded to my July 2 email regarding IBM's communications with the third-party intervenors. Please provide a date certain by which IBM will produce these documents.

Sapna

From: Laurie Stempler [<mailto:LStempler@desmaraisllp.com>]
Sent: Sunday, July 08, 2018 12:02 PM
To: Saina Shamilov <sshamilov@fenwick.com>; Groupon_IBM_Service@Fenwick.com
Cc: IBM Groupon Service <IBMGrouponService@desmaraisllp.com>; 'dmoore@potteranderson.com' <dmoore@potteranderson.com>; 'bpalapura@potteranderson.com' <bpalapura@potteranderson.com>; Day, John G. (jday@ashby-geddes.com) <jday@ashby-geddes.com>
Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Counsel,

We have not heard back from you. When will Groupon be making a witness available to answer our questions?

Laurie

From: Laurie Stempler
Sent: Friday, June 22, 2018 5:36 PM
To: sshamilov@fenwick.com; Groupon_IBM_Service@Fenwick.com
Cc: IBM Groupon Service <IBMGrouponService@desmaraisllp.com>; 'dmoore@potteranderson.com' <dmoore@potteranderson.com>; 'bpalapura@potteranderson.com' <bpalapura@potteranderson.com>; Day, John G. (jday@ashby-geddes.com) <jday@ashby-geddes.com>
Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Saina,

[REDACTED]
[REDACTED]
[REDACTED]

We anticipate needing no more than 3 hours of deposition time to investigate [REDACTED]
[REDACTED] Please let us know if Groupon agrees to make someone

available or provide a time to meet and confer Monday.

Laurie

From: Saina Shamilov <sshamilov@fenwick.com>
Sent: Friday, June 22, 2018 5:22 PM
To: Laurie Stempler <LStempler@desmaraisllp.com>; Groupon_IBM_Service@Fenwick.com
Cc: IBM Groupon Service <IBMGrouponService@desmaraisllp.com>; 'dmoore@potteranderson.com' <dmoore@potteranderson.com>; 'bpalapura@potteranderson.com' <bpalapura@potteranderson.com>; Day, John G. (jday@ashby-geddes.com) <jday@ashby-geddes.com>
Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Laurie, can you please tell me what document and columns/rows you are looking at? I am not sure I see the data that you are seeing and I want to make sure we are on the same page.

A few hours of deposition is not specific enough. How many hours of testimony are you seeking and on what topics specifically?

Thanks,
Saina

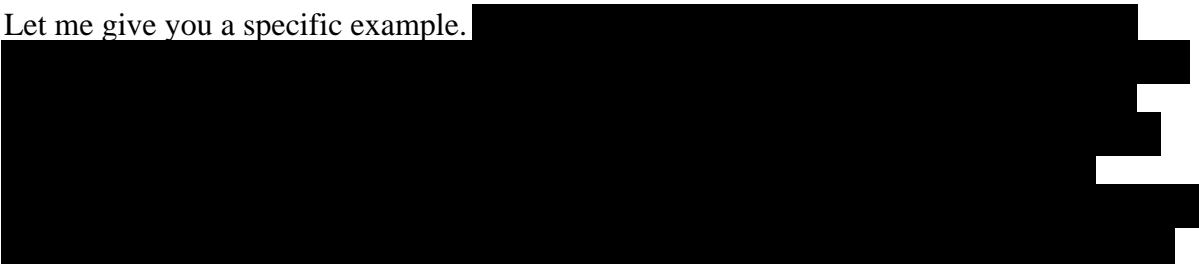
SAINA SHAMILOV

Partner | Fenwick & West LLP | 650-335-7694 | sshamilov@fenwick.com
Admitted to practice only in California.

From: Laurie Stempler [<mailto:LStempler@desmaraisllp.com>]
Sent: Friday, June 22, 2018 2:04 PM
To: Saina Shamilov <sshamilov@fenwick.com>; Groupon_IBM_Service@Fenwick.com
Cc: IBM Groupon Service <IBMGrouponService@desmaraisllp.com>; 'dmoore@potteranderson.com' <dmoore@potteranderson.com>; 'bpalapura@potteranderson.com' <bpalapura@potteranderson.com>; Day, John G. (jday@ashby-geddes.com) <jday@ashby-geddes.com>
Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Saina,

Let me give you a specific example.



[REDACTED]

Before Professor Hausman can prepare a supplemental report using the updated data, we need to make sure that he's using the right data in the right way. Please confirm whether Groupon will agree to make a witness available next week. Barring something unexpected, we do not anticipate needing more than a few hours to clarify these issues. If Groupon is unwilling to make a witness available, please provide times on Monday that your team can meet and confer.

Thank you.

Laurie

-----Original Message-----

From: Saina Shamilov <sshamilov@fenwick.com>

Sent: Thursday, June 21, 2018 9:18 PM

To: Laurie Stempler <LStempler@desmaraisllp.com>

Cc: Groupon_IBM_Service@Fenwick.com; IBM Groupon Service <IBMGrouponService@desmaraisllp.com>; bpalapura@potteranderson.com; dmoore@potteranderson.com; Day, John G. (jday@ashby-geddes.com) <jday@ashby-geddes.com>

Subject: Re: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Laurie, your email does not explain with specificity the issues you are seeing. What 'departure' are you referring to?

Based on your explanation, I don't understand why you need any additional information when you have represented to the Court that the only reason you need the updated financials is to update mathematical calculations performed by Dr. Hausman. Your email does not explain why Dr. Hausman cannot use the data to update his calculations. Can you please explain.

Thank you,
Saina

Saina S. Shamilov
Partner, Fenwick & West, LLP
650.335.7694

On Jun 21, 2018, at 7:57 PM, Laurie Stempler
<LStempler@desmaraisllp.com<<mailto:LStempler@desmaraisllp.com>>> wrote:

Saina,

The new data Groupon produced reflects a sudden and significant departure from the trends reflected in the previously produced data and confirmed by Groupon's corporate witness at his deposition. For example, [REDACTED]

[REDACTED]. IBM

needs to understand the cause of this change. Is Groupon willing to produce a witness for a short deposition to answer our questions?

Laurie

From: Saina Shamilov <sshamilov@fenwick.com<<mailto:sshamilov@fenwick.com>>>
Sent: Thursday, June 21, 2018 3:36 PM
To: Laurie Stempler
<LStempler@desmaraisllp.com<<mailto:LStempler@desmaraisllp.com>>>;
Groupon_IBM_Service@Fenwick.com<mailto:Groupon_IBM_Service@Fenwick.com>
Cc: IBM Groupon Service
<IBMGrouponService@desmaraisllp.com<<mailto:IBMGrouponService@desmaraisllp.com>>>;
'dmoore@potteranderson.com<<mailto:dmoore@potteranderson.com>>'
<dmoore@potteranderson.com<<mailto:dmoore@potteranderson.com>>>;
'bpalapura@potteranderson.com<<mailto:bpalapura@potteranderson.com>>'
<bpalapura@potteranderson.com<<mailto:bpalapura@potteranderson.com>>>; Day, John G.
(jday@ashby-geddes.com<<mailto:jday@ashby-geddes.com>>) <jday@ashby-geddes.com<<mailto:jday@ashby-geddes.com>>>
Subject: RE: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Laurie, what are the encountered issues? We cannot consider your request without understanding with specificity the purported issues.

SAINA SHAMILOV

Partner | Fenwick & West LLP | 650-335-7694 |

sshamilov@fenwick.com<<mailto:sshamilov@fenwick.com>>

Admitted to practice only in California.

From: Laurie Stempler [<mailto:LStempler@desmaraisllp.com>]

Sent: Thursday, June 21, 2018 12:23 PM

To: Groupon_IBM_Service@Fenwick.com<mailto:Groupon_IBM_Service@Fenwick.com>

Cc: IBM Groupon Service

<IBMGrouponService@desmaraisllp.com<<mailto:IBMGrouponService@desmaraisllp.com>>>;

'dmoore@potteranderson.com<<mailto:dmoore@potteranderson.com>>'

<dmoore@potteranderson.com<<mailto:dmoore@potteranderson.com>>>;

'bpalapura@potteranderson.com<<mailto:bpalapura@potteranderson.com>>'

<bpalapura@potteranderson.com<<mailto:bpalapura@potteranderson.com>>>; Day, John G.

(jday@ashby-geddes.com<<mailto:jday@ashby-geddes.com>>) <jday@ashby-geddes.com<<mailto:jday@ashby-geddes.com>>>

<jday@ashby-geddes.com<<mailto:jday@ashby-geddes.com>>>

Subject: IBM v. Groupon, 1:16-CV-122-LPS-CJB (D. Del.)

Counsel,

Thank you for producing the updated Groupon sales data through May 2018. After reviewing the data, we have encountered issues that warrant exploration with a Groupon witness. We cannot commit to a date for Professor Hausman's supplemental report until we have the opportunity to question a Groupon witness about the new data. To that end, please let us know by Monday, June 25th, whether Groupon will make Damien Schmitz or another 30(b)(6) witness with knowledge of the updated financial data available to sit for a short deposition next week concerning the updated financials. If Groupon is not willing to make a witness

available, please provide a time your team can meet and confer on Monday.

Laurie

Laurie Stempler
Desmarais LLP
230 Park Avenue
New York, NY 10169
(212) 351-3423
lstempler@desmaraisllp.com<<mailto:lstempler@desmaraisllp.com>>

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EXHIBIT I

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

INTERNATIONAL BUSINESS MACHINES
CORPORATION,

Plaintiff,

v.

GROUPON, INC.

Defendant.

C.A. No. 16-122-LPS-CJB

JURY TRIAL DEMANDED

**DEFENDANT GROUPON, INC.’S SUPPLEMENTAL RESPONSES TO PLAINTIFF
INTERNATIONAL BUSINESS MACHINES CORPORATION’S FIRST, SECOND,
AND THIRD SETS OF INTERROGATORIES (NOS. 1, 2, 4, 7, 8, 9, 10, 13, AND 14)**

Pursuant to Federal Rules of Civil Procedure 26 and 33, Defendant Groupon, Inc. (“Groupon”) hereby supplements its responses and objections to Plaintiff International Business Machines Corporation’s (“IBM”) First, Second, and Third Sets of Interrogatories (Nos. 1, 2, 4, 7, 8, 9, 10, 13, and 14) as follows:

GENERAL OBJECTIONS

The following general objections are stated with respect to each Interrogatory whether or not specifically identified in response thereto. To the extent that any of these general objections are not raised in its specific response to each Interrogatory, Groupon does not waive those objections.

1. Groupon objects to each Interrogatory to the extent that it is overly broad, unduly burdensome, oppressive, improper, and unreasonable in scope.

2. Groupon objects to each Interrogatory and the Definitions (“Definitions”) and Instructions (“Instructions”) incorporated by reference to the extent that they are vague, ambigu-

INTERROGATORY NO. 4:

Separately for each instrumentality identified in response to Interrogatory No. 1, identify all associated revenues, costs, profits, funding, and the sources thereof on a month-by-month basis from March 2010 to the present, including any Transaction Events to which the revenues were attributed, the monetary value of gross profits, operating profits, net profits, or any other profit metric that You use, and the monetary value of gross revenue, operating revenue, net revenue, or any other revenue metric that You use.

RESPONSE TO INTERROGATORY NO. 4:

Groupon incorporates its general objections as if fully set forth herein. Groupon objects to this Interrogatory as overly broad and unduly burdensome to the extent it seeks identification of “*all associated* revenues, costs, profits, funding, and the sources thereof on a month-by-month basis.” Groupon further objects to this Interrogatory as overbroad, unduly burdensome, and not proportional to the needs of this case to the extent it seeks information about “each instrumentality identified in response to Interrogatory No. 1.” IBM is only entitled to discovery on features of the Groupon instrumentalities that are accused of infringement as identified by IBM in its infringement contentions. Groupon objects to this Interrogatory to the extent that it is not limited to a relevant geographic scope, and thus seeks information that is neither relevant to the subject matter of this dispute nor proportional to the needs of this case. Groupon will respond as to revenue made in the U.S. Groupon objects to the request for information regarding “funding, and the sources [of revenues, costs, profits, funding]” as unduly burdensome, not relevant to the claim or defense of any party and not proportional to the needs of this case. Groupon objects to this Interrogatory as compound and consisting of multiple discrete subparts constituting separate interrogatories. Groupon incorporates its objection to IBM’s definition of “Transaction Event”

[REDACTED]

as vague and ambiguous, overbroad, unduly burdensome, and not proportional to the needs of the case. Groupon objects to the term “monetary value” as vague and ambiguous, calling for a legal conclusion, and premature as it calls for information that will be the subject of expert opinion and it seeks expert disclosure before the time contemplated by Fed. R. Civ. P. 26 and the Court’s orders in this case. Groupon incorporates its objection to IBM’s definition of “You” because it seeks to broaden the scope of the allowable discovery and seeks information that is not within the possession, custody, or control of Groupon, but is in the possession of third parties and non-parties to this lawsuit. Groupon further objects to the definition of this term as it includes Groupon’s attorneys and patent agents and seeks privileged and attorney-work product information. Groupon objects to this Interrogatory to the extent that it seeks the disclosure of information protected by the attorney-client privilege, work product doctrine, common interest privilege, duty of confidentiality, or any other applicable privilege, immunity, or restriction on discovery. Groupon objects to this Interrogatory as untimely, as IBM has not yet served its infringement contentions.

Subject to and without waiving any objections, Groupon responds as follows: After analysis of IBM’s infringement contentions, to be served on January 20, 2017, Groupon will investigate and identify documents reflecting U.S.-based revenues, costs and profits derived from features of the Groupon instrumentalities accused of infringement as identified by IBM in its infringement contentions during the relevant time period, and will supplement its answer to this interrogatory as appropriate. Investigation and discovery are ongoing, and Groupon reserves the right to supplement, amend, or modify its response to this Interrogatory as additional facts are learned and as otherwise appropriate.

SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 4:

Groupon incorporates by reference each of its General and Specific Objections to Interrogatory No. 4 set forth above. Pursuant to Fed. R. Civ. P. 33(d), information relevant to this Interrogatory may be ascertained from GROUP0023766-GROUP0024761, GROUP0026426, GROUP0026427, GROUP026430, and GROUP026425, which reflects numbers for Groupon's Canadian business.

SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 4:

Groupon incorporates by reference each of its General and Specific Objections to Interrogatory No. 4 set forth above. Subject to and without waiving its objections, Groupon further responds as follows: Pursuant to Fed. R. Civ. P. 33(d), information relevant to this Interrogatory may also be ascertained from GROUP308191. Groupon also incorporates by reference its forthcoming responsive expert report regarding damages to be served on or before November 3, 2017.

INTERROGATORY NO. 7:

To the extent you contend that non-infringing alternatives concerning the Accused Instrumentalities exist, identify each such non-infringing alternative and identify all factual and legal bases for your contention that each such alternative is or was non-infringing, acceptable, and available to you, and indicate the itemized cost of implementing each such non-infringing alternative.

RESPONSE TO INTERROGATORY NO. 7:

Groupon incorporates its general objections as if fully set forth herein. Groupon objects to this Interrogatory as overly broad and unduly burdensome to the extent it seeks identification of "*each* such non-infringing alternative." Groupon objects to the request for information about "non-infringing alternatives" as vague and ambiguous, calling for a legal conclusion, and prema-

INTERROGATORY NO. 14:

Separately identify each and every modification to each Accused Instrumentality that You have made since 2010 that You contend impacts the issue of infringement for any of the asserted claims of the Patents-in-Suit. For each such modification, identify the date of the modification, the specific lines of Source Code that were modified (if any), all other documents related to or showing the modification, the specific claim limitation(s) that You contend the modification impacts, and all factual and legal bases for Your contention that the Accused Instrumentality met or did not meet those claim limitations before the modification and after the modification.

RESPONSE TO INTERROGATORY NO. 14:

Groupon incorporates its general objections as if fully set forth herein. Groupon objects to this Interrogatory as overly broad, unduly burdensome, and not proportional to the needs of the case as seeking discovery relating to “*each and every* modification” and “*all* factual and legal bases.” Groupon objects to the terms and phrases “modification” and “impacts the issue of infringement” as vague and ambiguous. Groupon incorporates its objection to IBM’s definition of “Your” because it seeks to broaden the scope of the allowable discovery and seeks information that is not within the possession, custody, or control of Groupon, but is in the possession of third parties and non-parties to this lawsuit. Groupon further objects to the definition of this term as it includes Groupon’s attorneys and patent agents and seeks privileged and attorney-work product information. Groupon incorporates its objection to IBM’s definition of “Accused Instrumentalities” as vague and ambiguous, overbroad, unduly burdensome, not relevant to the claim or defense of any party and not proportional to the needs of this case as it does not identify any product with specificity and to the extent that it includes instrumentalities not identified by IBM in its infringement contentions. Groupon objects to this Interrogatory to the extent that it is not limited

[REDACTED]

to a relevant geographic scope; IBM is only entitled to discovery relating to Groupon instrumentalities that are made, used, offered for sale, sold, or imported in(to) the U.S. Groupon further objects to this request as not proportional to the needs of this case to the extent the requested information is not reasonably accessible by Groupon without undue burden or cost. Groupon objects to this Interrogatory as compound and consisting of multiple discrete subparts constituting separate interrogatories. Groupon objects to the Interrogatory as seeking information not directly related to a claim or defense of any party in the above-entitled action, nor proportional to the needs of this case, considering the importance of the issues at stake in the action, the amount in controversy, the parties' relative access to relevant information, the parties' resources, the importance of the discovery in resolving the issues, and whether the burden or expense of the proposed discovery outweighs its likely benefit. Groupon objects to the request for information about modifications that "impact[] the issue of infringement for any of the asserted claims of the Patents-in-Suit" as vague and ambiguous, calling for a legal conclusion, and premature as it calls for information that will be the subject of expert opinion and it seeks expert disclosure before the time contemplated by Fed. R. Civ. P. 26 and the Court's orders in this case. Groupon also objects to this request as premature as IBM has not served its Final Infringement Contentions. Groupon objects to this Interrogatory to the extent that it seeks the disclosure of information protected by the attorney-client privilege, work product doctrine, common interest privilege, duty of confidentiality, or any other applicable privilege, immunity, or restriction on discovery. Further, IBM's infringement contentions appear to only reference and accuse the current version of the Groupon Accused Instrumentalities. IBM bears the burden of proving that each version of Groupon's instrumentalities accused of infringement infringe one or more of the asserted claims of the Patents-in-Suit.

[REDACTED]

Subject to and without waiving any objections, Groupon responds as follows: Groupon does not infringe any of the Patents-in-Suit. Further, IBM has not yet identified any Groupon code or non-public aspects of the system and explained how they infringe. Nonetheless, the accused features of Groupon's website have undergone various significant changes since they launched. [REDACTED]

[REDACTED]

[REDACTED]. Pursuant to Rule 33(d) information relevant to this may be ascertained from the source code Groupon has made available in this case. Investigation and discovery are ongoing, and Groupon reserves the right to supplement, amend, or modify its response to this Interrogatory as additional facts are learned and as otherwise appropriate.

SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 14:

Groupon incorporates by reference each of its General and Specific Objections to Interrogatory No. 14 set forth above. Subject to and without waiving its objections, Groupon responds as follows: Groupon does not infringe any of the Patents-in-Suit, and incorporates by reference its forthcoming responsive expert report regarding non-infringement to be served on or before November 3, 2017. Nonetheless, the accused features of Groupon's website have undergone various significant changes since they launched. [REDACTED]

[REDACTED]

[REDACTED]. Pursuant to Rule 33(d)

information relevant to this may be ascertained from the source code Groupon has made available in this case.

Of counsel:

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(650) 988-8500

Dated: September 15, 2017

ASHBY & GEDDES

/s/ Phillip J. Haack

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Attorneys for Defendant Groupon, Inc.

EXHIBIT J

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

INTERNATIONAL BUSINESS MACHINES CORPORATION,)	
)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 16-122-LPS-CJB
)	
GROUPON, INC.,)	
)	
Defendant.)	

**DEFENDANT GROUPON, INC.’S RESPONSES TO
PLAINTIFF INTERNATIONAL BUSINESS MACHINES CORPORATION’S
FIRST SET OF INTERROGATORIES (NOS. 1-8)**

Pursuant to Federal Rules of Civil Procedure 26 and 33, Defendant Groupon, Inc. (“Groupon”) hereby responds and objects to Plaintiff International Business Machines Corporation’s (“IBM”) First Set of Interrogatories (Nos. 1-8) as follows:

GENERAL OBJECTIONS

The following general objections are stated with respect to each Interrogatory whether or not specifically identified in response thereto. To the extent that any of these general objections are not raised in its specific response to each Interrogatory, Groupon does not waive those objections.

1. Groupon objects to each Interrogatory to the extent that it is overly broad, unduly burdensome, oppressive, improper, and unreasonable in scope.
2. Groupon objects to each Interrogatory and the Definitions (“Definitions”) and Instructions (“Instructions”) incorporated by reference to the extent that they are vague, ambiguous, unintelligible, fail to describe the information sought with reasonable particularity, or seek to impose obligations on Groupon that are broader than, or inconsistent with, the Federal Rules

INTERROGATORY NO. 5:

Assuming the Court will find that You infringe the Patents-in-Suit, explain in detail Your contentions regarding the amount of damages that IBM is entitled to recover, including the reasonable royalty rate corresponding to such damages, the royalty base to which the reasonable royalty should be applied, and Your method(s) of computation, and identify all facts supporting, refuting, or rebutting such contentions, including all documents (including patent license agreements and licenses related to the Accuse Instrumentalities) supporting, refuting, or rebutting such contentions, all persons with knowledge of any facts relied on by You in making such contentions, and all experts and consultants retained to prepare damage calculations.

RESPONSE TO INTERROGATORY NO. 5:

Groupon incorporates its general objections as if fully set forth herein. Groupon objects to this Interrogatory as overly broad and unduly burdensome to the extent it seeks identification of “*all* facts supporting, refuting, or rebutting” Groupon’s contentions, “*all* documents . . . supporting, refuting or rebutting” Groupon’s contentions, and “*all* persons with knowledge.” Groupon incorporates its objection to IBM’s definition of “Your” because it seeks to broaden the scope of the allowable discovery and seeks information that is not within the possession, custody, or control of Groupon, but is in the possession of third parties and non-parties to this lawsuit. Groupon further objects to the definition of this term as it includes Groupon’s attorneys and patent agents and seeks privileged and attorney-work product information. Groupon objects to this request as premature, as it calls for information that will be the subject of expert opinion and it seeks expert disclosure before the time contemplated by Fed. R. Civ. P. 26 and the Court’s orders in this case. Groupon objects to this Interrogatory as compound and consisting of multiple discrete subparts constituting separate interrogatories. Groupon objects to this Interrogatory to the

extent that it seeks the disclosure of information protected by the attorney-client privilege, work product doctrine, common interest privilege, duty of confidentiality, or any other applicable privilege, immunity, or restriction on discovery. Groupon further objects to the extent that the request “assum[es] the Court will find that [Groupon] infringe[s] the Patents-in-Suit.” Neither Groupon nor any of its instrumentalities infringe any of the patents-in-suit. Groupon objects to this Interrogatory as untimely, as IBM has not yet served its infringement contentions.

Subject to and without waiving any objections, Groupon responds as follows: Groupon will, at the appropriate time under the Court’s Scheduling Order, Local Rules, and the Federal Rules of Civil Procedure and pursuant to the parties’ agreed rules for expert discovery, serve damages expert reports in response to the damages expert report served by IBM, if any, and produce documents supporting any such damages expert report. Investigation and discovery are ongoing, and Groupon reserves the right to supplement, amend, or modify its response to this Interrogatory as additional facts are learned and as otherwise appropriate.

INTERROGATORY NO. 6:

Separately for each Patent-in-Suit, identify all actions You took as a result of becoming aware of that patent, including any investigation into Your potential infringement of that patent and the validity and/or enforceability of that patent, any actions You undertook to avoid infringing that patent, whether You sought and/or obtained any opinion of counsel regarding that patent, and the content of any such opinion.

RESPONSE TO INTERROGATORY NO. 6:

Groupon incorporates its general objections as if fully set forth herein. Groupon objects to this Interrogatory as overly broad and unduly burdensome to the extent it seeks identification of “all actions.” Groupon incorporates its objection to IBM’s definition of “You” and “Your”

because it seeks to broaden the scope of the allowable discovery and seeks information that is not within the possession, custody, or control of Groupon, but is in the possession of third parties and non-parties to this lawsuit. Groupon further objects to the definition of this term as it includes Groupon's attorneys and patent agents and seeks privileged and attorney-work product information. Groupon objects to this Interrogatory as compound and consisting of multiple discrete subparts constituting separate interrogatories. Groupon objects to this Interrogatory to the extent that it seeks the disclosure of information protected by the attorney-client privilege, work product doctrine, common interest privilege, duty of confidentiality, or any other applicable privilege, immunity, or restriction on discovery.

Subject to and without waiving the foregoing objections, Groupon responds that neither Groupon nor its instrumentalities infringe any valid claim of any of the patents-in-suit, and thus Groupon has not taken any action as a result of becoming aware of the patents-in-suit to "avoid infringing" any asserted claim of such patents. Any additional responsive and non-privileged information on this subject will be provided in expert reports and other submissions at the appropriate time under the Court's Scheduling Order, Local Rules, and the Federal Rules of Civil Procedure and pursuant to the parties' agreed rules for expert discovery. Investigation and discovery are ongoing, and Groupon reserves the right to supplement, amend, or modify its response to this Interrogatory as additional facts are learned and as otherwise appropriate.

INTERROGATORY NO. 7:

To the extent you contend that non-infringing alternatives concerning the Accused Instrumentalities exist, identify each such non-infringing alternative and identify all factual and legal bases for your contention that each such alternative is or was non-infringing, acceptable,

EXHIBIT K

**THIS EXHIBIT HAS BEEN
REDACTED IN ITS ENTIRETY**

EXHIBIT L

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

_____)	
)	
INTERNATIONAL BUSINESS MACHINES)	
CORPORATION,)	
)	
Plaintiff,)	
)	C.A. No. 16-122-LPS-CJB
v.)	
)	
GROUPON, INC.,)	
)	
Defendant.)	
_____)	

EXPERT REPORT OF JERRY A. HAUSMAN
October 6, 2017

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

HIGHLY CONFIDENTIAL – ATTORNEYS' EYES ONLY

fully below, I have determined that the appropriate measure of damages to compensate IBM for Groupon's infringement to date would be a reasonable royalty.

12. Based on my analysis, as described more fully below, I have concluded that:

- A reasonable royalty for Groupon's infringement of the '967 patent from March 2010 to August 18, 2015 (the date that the '967 patent expired) would be at least \$23,546,921.¹
- A reasonable royalty for Groupon's infringement of the '849 patent from March 2010 to July 2017 (the last date for which Groupon produced pertinent sales data) would be at least \$63,276,535.²
- A reasonable royalty for Groupon's infringement of the '601 patent from March 2010 to June 7, 2016 (the date that the '601 patent expired) would be at least \$40,691,044.³
- A reasonable royalty for Groupon's infringement of the '346 patent from mid-2011 to July 2017 (the last date for which Groupon produced pertinent sales data) would be at least \$48,369,555.⁴

13. Groupon produced sales data through July 2017. Therefore, my report only accounts for Groupon's infringement during March 2010 through July 2017. I will account for Groupon's infringement of the '849 and '346 patents for any period after July

¹ Exhibit 4.

² Exhibit 5. Although I understand that damages begin earlier, should Groupon contend and should the jury find that damages begin in March 2016, a reasonable royalty for Groupon's infringement of the '849 patent until July 2017 would be \$17,810,034. Exhibit 5.4.

³ Exhibit 6. Although I understand that damages begin earlier, should Groupon contend and should the jury find that damages begin in March 2016, a reasonable royalty for Groupon's infringement of the '601 patent until June 7, 2016 would be \$2,867,196. Exhibit 6.2.

⁴ Exhibit 7. Although I understand that damages begin earlier, should Groupon contend and should the jury find that damages begin in March 2016, a reasonable royalty for Groupon's infringement of the '346 patent until July 2017 would be \$14,336,587. Exhibit 7.3.

EXHIBIT M



OCEAN TOMO[®]
INTELLECTUAL CAPITAL EQUITY[®]

INTERNATIONAL BUSINESS MACHINES CORPORATION
V.
GROUPON, INC.

Case No. 1:16-cv-00122

REBUTTAL EXPERT REPORT OF JAMES E. MALACKOWSKI

November 3, 2017

HIGHLY CONFIDENTIAL – ATTORNEYS' EYES ONLY



that would be appropriate to award IBM should the Patents-in-Suit be found to be valid and infringed by Groupon. My opinion is based on the hypothetical negotiation construct outlined in the *Georgia-Pacific Corp. v. United States Plywood Corp.* (“*Georgia-Pacific*”) case. Specifically, my opinion is the royalty amount that the parties would have agreed to for a license to the Patents-in-Suit if they had conducted a hypothetical negotiation as of the date of first alleged infringement. My opinion is supported by the *Georgia-Pacific* factors and other evidence of the value of the asserted patents, including:

- The relatively minimal technical advance offered by the Patents-in-Suit as well as the vast number of un-accused features (and non-features, including Groupon’s implementation and market recognition) that contribute to the value of the accused Groupon instrumentalities;
- Relevant agreements and transactions involving comparable technology; and
- The availability of non-infringing alternatives to the Patents-in-Suit.

Based on the totality of the circumstances in this case and the information available to me at this time, I have concluded that the appropriate form and amount of compensation in this case is a lump-sum royalty through the life of the Patents-in-Suit of between \$3 million and \$5 million.¹²

IBM’s damages expert, Dr. Jerry Hausman, has provided reasonable royalty damages for each of the Patents-in-Suit individually, though as discussed in this report, Dr. Hausman’s damages quantifications cannot be used to determine a total royalty for the Patents-in-Suit collectively. As discussed in more detail below, the analysis performed by Dr. Hausman is flawed and significantly overstates the appropriate damages in this case and the outcome of the hypothetical negotiation.

3. RELEVANT PARTIES

3.1 International Business Machines Corporation

IBM was founded in 1911 as the Computer-Tabulating-Recording Co. The company changed its name to International Business Machines Corporation in 1924.¹³ IBM has provided various product and service offerings throughout its history, but has always focused on technology. During the last 50 years, IBM has competed in various tech-related segments, such as mainframe computers, personal computers, IT services, and enterprise software. Today, IBM focuses on digital technology and consulting, operating through five business segments:¹⁴

- Cognitive Solutions – Provides an array of technologies ranging from analytics to IBM’s Watson AI;

¹² I understand that Groupon contends that damages in this matter are limited to six years before the filing of the complaint, pursuant to 35 U.S.C. § 286. The Complaint for Patent Infringement in this matter was filed on March 2, 2016, limiting damages to begin on March 2, 2006. See Defendant Groupon’s Responses to Plaintiff IBM’s Third Set of Interrogatories (Nos. 12-19), August 10, 2017, p. 6; Complaint for Patent Infringement, March 2, 2016, p. 1.

¹³ International Business Machines Corporation, SEC Form 10-K for the Fiscal Year ended December 31, 2016, p. 1.

¹⁴ International Business Machines Corporation, SEC Form 10-K for the Fiscal Year ended December 31, 2016, pp. 4-6.

Appendix 14

International Business Machines Corporation v. Groupon, Inc.
GROUPON IMPLICATED WORLDWIDE REVENUE
Appendix 14.0

	Total
[1] Implied U.S Revenue (2010-2016)	\$8,916
[2] Total U.S Revenue (2010-2016)	9,285
Percent of U.S Revenue Implied	96.0%
[2] Groupon Worldwide Revenue (2008-2018)	\$22,628
Implied Worldwide Revenue	\$21,730

Notes:

- [1] Appendix 14.3.
- [2] Appendix 14.4.
- [3] Appendix 13.0.

EXHIBIT N

**THIS EXHIBIT HAS BEEN
REDACTED IN ITS ENTIRETY**

EXHIBIT O

**THIS EXHIBIT HAS BEEN
REDACTED IN ITS ENTIRETY**